

Technische Unterlage **VTC CD-VU4085**

<u>-</u>0 -- 8 8 0 0 0.0

SPECIFICATIONS

AV MASTER AMPLIFIER section

When SURROUND is OFF

FRONT : 2ch × 45W (8Q), 0.09% (1KHz) Input Sensitivity Impedance : AUX : 250mV/20kΩ Frequency Response : AUX : 20-60KHz (-3dB) Channel Speration : 50rtR

. When DOLBY PRO LOGIC Is ON FRONT : 2ch × 20W (811), 0.09% (1KHz)

CENTER : 1ch - 20W (80), 0 09% (1Kfir) REAR : 2ch - 10W mun, 0 h% (1KHz)

Frequency Response: CFNTER: 20-80KHz (3dB)
REAR: 100-8KHz (-3dB)

S/N Ratio : REAR : 60dB

CENTER: 65dR

Power Consumption: 210W

Power Requirements : AC 230V, 50Hz nsions (W×H×D) : 275 × 107 < 280mm

TUNER Section

FM SECTION

Frequency Range Sensitivity (S/N 30dB)

: 3.0μV (75Ω) : MONO :

STEREO : 0.4%

: 87.5~108MHz

MONO : 70dB STEREO : 65dB

. AM SECTION

S/N Ratio

: 522~1620KHz : 600uV

: 275 × 94 × 294mm

CASSETTE DECK Section

Track System Recording System

AC bias

: AC erasing : 4.8cm/sec

: DC motor CrOz : 40~15.000Hz

FF and REW

: 40-16,000

w and Flutter

: 0.25% (JIS, WRMS)

S/N Ratio

Dolby OFF : 55dB (CCIR/ARM)

Matel

Dolby B ON : 65dB (CCIR/ARM) Dolby C ON : 75dB (CCIR/ARM) Dimensions (W×H×D)

: 275 × 107 × 280mm

COMPACT DISC PLAYER Section

· AUDIO

: 20~20,000Hz ± 2.5dB : 90dB (IHF-A Filter)

S/N Ratio

 SIGNAL : 44.1KHz

Sampling Frequency Error Condition Meth

Decording D/A

: CIRC : 16 bit Linear

oversampling digital filte

Method : Non-contact optical reading

Source of light Wave Length of light

: Semico : 780nm

ms(W×H×D)

: 275×94×280mm

UTS-Nr.:

999

OUELLE

Best.Nr.:

0380352/01

Ger.Bez.:

UNIVERSUM-BAUSTEIN-ANLAGE

GKZ: WOT:

G GERAET 650 MICRO-/MINI-ANLAGEN

KD-Sektor:

R RUNDFUNK

00 KEIN DIAGNOSEBAUM VORHANDEN STG STEREOG., TUNER, VERST., STEUERG

IFW-Fehlergru.: 205 RDF., VERST., TB., PHONO, CD, CB

Beschreibung

Type/Privileg/Universum.Nr VTC-CD-VU4085 5 BAUSTEINE

VK-Preis: 998.00

Serviceart:

01 OUELLE-TED

Garantie fuer Kunden 06 Monate

Sondervereinbarungen: O SIEHE SERVICEART



CAUTION: After servicing this appliance and prior to returning to customer, measure the resistance between either primary AC cord connector pris (with unit NOT connected to AC mains and its Power switch ON), and the face or Front Panel of product and controls and chasses bottom. Any resistance measurement less than 1 Magohms should cause unit to be repaired or corrected before AC power is applied, and verified before return to user/customer. Ref.UL Standard NO. 1492.

NOTE ON SAFETY:

Symbol \triangle : Fire or electrical shock hazard. Only original parts should be used to replace Any other component substitution(other than original type), may increase risk or fire or a

LASER PRODUCT

Best.-Nr.:

038.035.2

038.036.0

038.037.8

038.038.6

Leisten Sie einen Beitrag zum Umweltschutz

- Verbrauchte Batterien und Akkumulato-ren (Akkus) gehören nicht in den HausmOli
- Sie können sie bei einer Sammeistelle für
- Althatterien bzw. Sondermüll abgeben. Informieren Bie einh bitte bei Ihrer Ge
- Reinrie.

 Batterlen und Akkus mit dem Recyclingsymbol können Sie auch in den Quelle-Verkaufsstellen Agenturen und TKD-Stellen abgeben.

Umwelthinweise



dieses MIDI-BAU-STEINSET eines Tages aus-gedient hat, sollten Sie es nicht einfach in den Hausmüll

werlen. Sicher gibt es in Ihrer Gemeinde einen Wertstoff- oder Recyclinghof, über den Altgeräte angenommen und einer Verwer-

Machen Sie sich diese kleine Mühe

" PE für Polyetylen PP für Polypropyler

PS für Polystyrol 02 = PE-HD 04 = PE-LD

V 4085 038.024.6 C 4085 038.025.3 038.027.9 T4085 038.028.1 CD 4085

MEGA 707

(B) WAR



ATTENTION



@ WA

KAT. 984

DATUM 09.09.98

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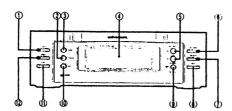
Nachdruck nicht gestattet Änderungen vorbehalten

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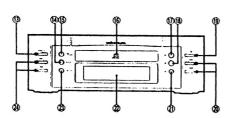
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Bedienungselemente

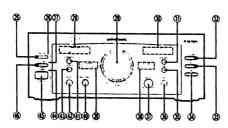
RDS-Tuner



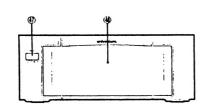
CD-Spieler



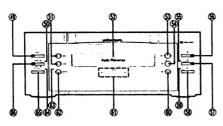
Verstärker



VU-Meter



Cassettendeck



Bedienungselemente und Funktionen

VU-Meter

- (I) RANGE = Ändern der Empfindlichkeit
- W VU-Pegelanzeigen Cassettendeck
- (II) RESET = Bandzählwerk zurückstellen
- Anzeige für DOLBY NR. rot / grün
- ⑤ ◀ = schneller Cassettenrücklauf Seite "B" ► = schneller Cassettenvorlauf Seite "A"
- (1) Cassettenschublade
- ⑤ ► = Wiedergabe von Seite "A"
- = Wiedergabe von Seite "B"
 ③ Anzeige für PAUSE-Funktion
- schublade
- II = Pausetaste
- (9) REC = Aufnahmetaste
- (9) Funktionsanzeige für Aufnahme
- = Stopptaste
- ⑥ ◁/▷ Laufrichtungsanzeigen; die jewe Laufrichtung der Cassette wird angezeigt (i) REPEAT = Wiederholautomatik
- Anzeige für REPEAT-Funktion
- (Anzeige für REV MODE-Funktion
- (6) REV MODE = Wahl der Cassettenwie
- (A) DOLBY NR. = Rauschunterdrückungssy-

Bedienungselemente und Funktionen

- 1) TIMER = Aufrufen der Uhr- oder Timerzeit
- (1) ST/MONO = STEREO/MONO-Umschal-
- ① FM/AM = Wahl des Frequenzbereichs; FM = UKW AM = Mittelwelle
- Tunerdisplay
- ③ ▲ TIME/TUNING/CH = Einstellen der Zeit oder Frequenz nach oben (höhere Fre-
- ▼ TIME/TUNING = Einstellen der Zeit oder Frequenz nach unten (niedrigere Frequenzen)
- () FREQ MODE = Wahl der Frequenzeinstellung; automomatisch/manuell oder Aufrufen der gespeicherten Sender
- ① TIME MODE = Einstellen der Uhr-/Alarmzeit ① CANCEL = Löschen der gespeicherten
- MEMO/SET-AUTO/MANUAL = Automa-
- tische/manuelle Senderspeicherung (1) RDS = Radio Data System-Funktionen
- einschalten und wählen 1) SLEEP = Wählen der automatischen Ausschaltzeit
- 1) DIMMER = Einstellen der Anzeigehelligkeit für Tuner und CD-Spieler

CD-Spieler

- (1) PROGM/CLR = Speichern der CD-Titel und Löschen der Programmierung
- (ii) REPEAT = Wiederholautomatik eines/ aller Titel
- (B) TIME/COUNTER = Umschalten von Zeitauf Zählwerksanzeige
- (i) CD-Schublade
- ① ► = Wiedergabetaste für CD
- (ii) = CD-Wiedergabe beenden
- (i) ▲ = Öffnen der CD-Schublade
- (I) SURROUND M. = Wahl des Klangbildes DOLBY PRO LOGIC = 5-Kanal-Wieder-

DOLBY 3 STEREO = 3-Kanal-Wiedergabe Raumklangwahl HALL

Raumklangwahl THEATER Raumklangwahl LIVE

@ PHONES = Kopfhörerbuchse 6,3 mm Ø

- ►►I = Titelwahl vorwärts/
- I◀◀ = Titelwahl rückwärts
- 1 II = CD-Pause
- ② CD-Spielerdisplay
- RANDOM = Wiedergabe einer Zufallsrei
- ▶▶ = Suchlauf vorwärts

Verstärker

Die Funktionsanzeigen erscheinen im Tunerdiaplay (i)

- SURROUND Dolby Surround-Funktion ein-/ausschalten
- (1) Anzeige für eingeschaltete SURROUND-Funktion
- Anzeige für eingeschaltete TEST-TON-Funktion
- 3 SURROUND MODE = Anzeige der gewählten Surround-Funktion
- (7) VOL = Lautstärkeregier, Gesamtiautstärke
- (3) FUNCTION = Anzeigen für die gewählte
- 1 BASS/TREBLE = Einstellen der Tiefen/ Höhen um +/- 10 dB
- TUNCTION = Wahl der Betriebsart

TUNER = Rundfunk TAPE = Cassettenbetriet

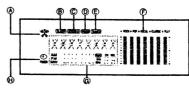
CD = CD-Wiedergabe

AUX = Wiedergabe von Zusatzgeräten MD = Tonwiedergabe von einem MD-Gerät

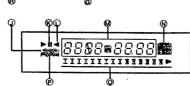
- DISPLAY = Wahl der Klangbilddarstellung
- EQ-MODE = Wahl des Klangbildes
- BALANCE ≈ Lautstärkeausgleich rechter/linker Kanal
- MIC = Mikrofonanschluß 6,3 mm Q MIC VOL = Mikrofonmischregler
- DELAY TIME = Anzeige S/M/L
- (3) CENTER MODE = Anzeige der Center-Betriebsart
- (i) IR SENSOR = Fernbedienungsempfänger
- (i) CENTER M. = Wahl der Center-Betriebsart
- (4) Bereitschaftsanzeige ON/STANDBY Bereitschaft = rot Eingeschaltet = grün
- @ POWER = Netzschalter
- (4) TEST TONE = Signal zur Abstimmung aller Pegel

Funktionsanzeigen im Tuner/CD-Spielerdisplay

RDS-Tunerdisplay



CD-Spielerdisplay



RDS-Tunerdisplay

- Surround-Anzeige
 SLEEP Anzeige
- © STEREO Anzeige
- PRGM = Senderprogramm-Anzeige
 TUNED = Optimale Sendereinstellung
- EQ MODE = Anzeige der Equalizer-Charakteristik ROCK POP VOCAL-CLASSIC und FLAT
- @ Funktion-, Sendemamen-, PTY-, Frequenz-, Zelt-, Balance, Bandzählwerkanzeige RERR LEVEL = Lautstärkeeinstellung für rückseitige Lautsprecherboxen CENTER LEVEL = Lautstärkeeinstellung für Mittellautsprecher BASS = Einstellen der Basswerte
- TREBLE = Einstellen der Höhen (H) (5) TIRER = Timer-Funktionsanzeige
- CD-Spielerdisplay

 ① RANDOM = Wiedergabe einer Zufallsrei-

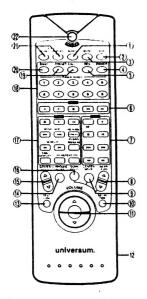
- gabe

 ® II = Anzeige der Pausefunktion

 ©

 = Cassettenwiedergabe im Reverse-Mode
- M Spielzeit-/Titelnummernanzeige
- Manzeige der gewählten Repeatfunktion
 Titelnummernanzeige in Balkenform
 PROGRAM = Anzeige für Wiedergabe einer Programmreihenfolge

Fernbedienung



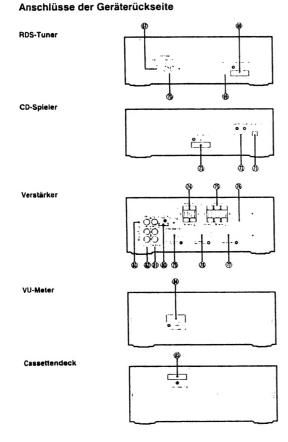
Bedienungselemente und Funktionen

- SLEEP = Wählen der automatischen Ausschaltzeit
- @ Funktionstaste AUX
- MUTE = Absenken der Lautstärke
- O DIMMER = Finstellen der Anzeigehelligkeit
- 6 RDS = Wählen der RDS-Betriebsart
- O Funktionstasten für Cassettenbetrieb: ◄/► = Cassettenwiedergabe Seite "A" oder "B". ◄◄ = Suchlauf vorwärts. ►► = Suchlauf ruckwarts: ■ = Stopp: II = Pause

- Funktionstasten für den MD Recorder POWER = MD Ein- bzw. Ausschalten;
 - ➤ = MD-Wiedergabe;
 = MD-Stop; II = CD-Pause
- I ◀ = Suchlauf rückwärts: ▶▶I = Suchlauf vorwärts; I◄◄= Titelwahl rückwarts, ▶ > - I itelwahl verwärts
- O REAR LEVEL = Lautstärkeeinstellung für hintere Lautsprecher
- O CENTER MODE = Wahl der Center-Betriebsart
- @ DELAY = Einstelltasten für die Zeitverzö-
- gerung

 VOLUME / + = Lautstärkeeinstellung
- Batteriefach (Rückseite) für 2x 1,5 V
- 1 TEST TONE = Signal zur Abstimmung
- **BURROUND = Surround-Funktion Ein-/ Ausschalten
- **⑤** CENTER LEVEL = Lautstärkeeinstellung für Center- Lautsprecher
- SURR MODE = Ein-/Ausschalten der SUBBOUND-Funktion
- 1 Funktionstasten CD-Spieler:
 - = CD-Stopp; > = CD-Wiedergabe;
 - MUSIC SKIP I ◀ = Titelwahl rückwärts:
 - ▶▶I = Titelwahl vorwärts; PROG (CLEAR) = Speichern der CD-
- Titel/Löschen der Programmierung; SEARCH ◀◀ = Suchlauf rückwärts;
- = Suchlauf vorwärts
- RANDOM = Zufallswiedergabe;
- TIME DISPLAY = Umschalten der Spielzeitanzeige:
- REPEAT 1/ALL = Wiederholautomatik A-B = Wiederholung
- 1 0 = Aufrufen der Senderspeicher/ CD-Titel
- PRESET CALL = Aufrufen der gespeicherten Sender
- BAND = Wählen des Frequenzbereichs
- FM (UKW) oder AM (Mittelwelle)
- EQ MODE = Wahl des Klangbildes
 POWER = Einschalten der Anlage

aus Bereitschaft



Technische Daten

Netzanschluß:

230 V ~ +6 /-10% 50 Hz Leistungsaufnahme: 210 Watt

Abmessungen in cm cs. Breite 27,5 /Höhe 22,5 /Tiefe 27

Verstärkerteil

Maximale Ausgangsleistung: 2x 300 Watt bei Stereobetrieb

utsprechermindestimpedanz

8 Ohm (Anschlußwert)

Übertragungsbereich: von 40 Hz - 16 kHz 1,5 dB

Übersprechdämplung: 30 dB bei 1000 Hz

Pro-Logic-Betrieb

Ausgangsleistung: 2x 200 Watt

Hauptlautsprecher

2x 50 Watt Surround links/

Surround rechts

1x 90 Watt Center-Kanal

Frequenzgang: Dolby Surround 100Hz - 7kHz, Matrix 20 Hz - 20 kHz Hall 100 Hz - 7 kHz

Signal/Rausch-Verhältnis

(im Surround-Betrieb): >75 dB

Verzögerungszeit:

20 ms; im Dolby-Betrieb auf 15 und 30 ms umschaltbar

Verzögerungsverfahren:

Eingangsempfindlichkeit (Line-IN):

Eingangsimpedanz:

RDS-Tuner

- (ii) FM 75 () (UKW) = Antennenbuchse
- (SYSTEM CONNECTOR (= Anschluß
- lur Tuner-Systemsteuerung

 ii) RESET = Speicherrückstelltaste

 iii) AM LOOP = Antennenanschlüsse für Mittelwellen-Rahmenantenne

CD-Spieler

- 1) DIGITAL OUTPUT = Digitaler Lichtleiterausgang zum Anschluß an ein digitales Aufnahmegerät, z.B. MD-Gerät
- (1) REMOTE CONTROLL TO MD = Fern-steueranschluß für MD-Recorder
- (1) SYSTEM CONNECTOR (8) = Anschluß für CD-Systemsteuerung (weißer Stekker)

Verstärker

- MAIN SPEAKER = Stereolaulsprecheranschlüße, Frontlautsprecher R = rechter Kanal (rot +) L = linker Kanal (schwarz -)
- Pro Logic-Lautsprecheranschlüsse CENTER = Lautsprecheranschluß (rot +/schwarz -) für Mittellautsprecher REAR = rückseitiger Lautsprecheranschluß R = rechter Kanal (rot +/schwarz -)
- L = linker Kanal (rot +/schwarz -) (1) Netzanschlußkabel 230 V/50 Hz
- TO AM/FM TUNER (A) = Systemsteue rungskabel für den Tuner
- 1) TO COMPACT DISC PLAYER (8) = Sys-
- temsteuerungskabel für den CD-Spieler

 TO CASSETTE DECK © = System-
- steuerungslabel für das Cassettendeck

 (ii) SYSTEM CONNECTOR (ii) = System-
- steuerungsanschluß für das VU Meter

Maximale Eingangsspannung: 3.5 V

Betriebsarten:

Dolby Pro Logic, Dolby 3 Stereo.

Itali, Demo und Live REAR = Lautsprecheran 8 - 16 ()

CENTER = Lautsprecheran 8 12

FM-Bereich (UKW)

87.5 - 108 MHz

Emplindlichkeit: 6 µV

Hub: 22.5 kHz und S/R - 26 dB: 40 kHz

Hub - 46 dB S/R: 40 μV

Fremdspannungsabstand: >50 dB

Pilotunterdrückung: 19 kHz = 40 dB

38 kHz = 50 dB

MW-Bereich

MW 521 - 1620 kHz

Empfindlichkeit für MW 1500 µV 26 dB S/N:

Cassettenteil

Übertragungsbereich Aufnahme und

Wiedergabe: (-8 dB) 63 Hz - 12500 Hz

Geschwindigkeitsabweichung: 1.0 % Tonhöhenschwankung: 0.3 %

Tonband: Normal-Cassetten/Chrom

(Eisenoxid, Fe,O,)/CrO,

50 dB

Geräuschspannungsabstand: Löschdämpfung: 70 dB

CD-Spieler Optischer Tonabnehmer:

3-Strahlen-Laser Fehlerkorrektur: CIRC

D/A-Umwandler:

16-Bit-linear mit 8-fach Oversampling

(i) MD-PLAYER IN = Analoger Eingang eines MD-Spielers (Wiedergabe)
R = rechter Kanal (rot)

L = linker Kanal (weiß)

(MD = Mini-Disk)

(P) AUX R/L = Anschluß für Zusatzgerate (Wiedergabe)

R = rechter Kanal (rot) L = linker Kanal (weiß)

(1) REC OUTPUT = Analoger Ausgang für ein zusätzliches Aufnahmegerät, z.B. MD-Recorder

R = rechter Kanal (rot) L = linker Kanal (weiß)

VU-Meter

(A) SYSTEM CONNECTOR TO AMPLIFIER (D) = VU-Meter Anschlußkabel zum Verstärker

Cassettendeck

(ii) SYSTEM CONNECTOR (ii) = Anschluß für Cassetten-Systemsteuerung

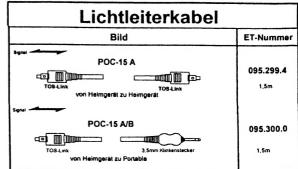
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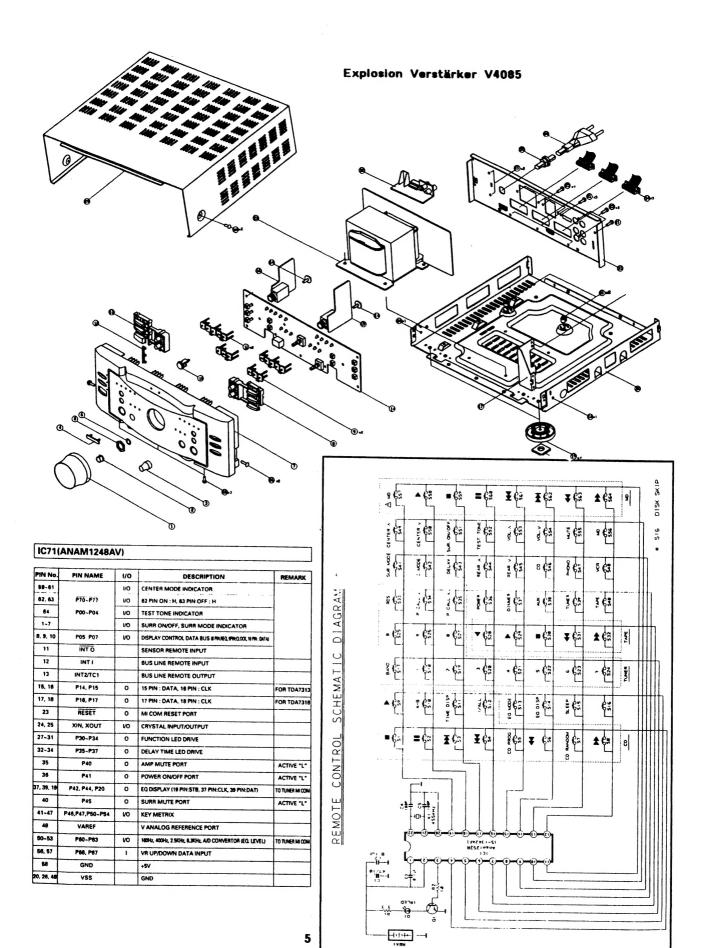
Die Verbindungskabel (A) - (B) - (C) - (D) des Verstärkers sind mit den entsprechenden Buchsen (A) - (B) - (C) - (D) der Einzelbausteine zu verbinden.

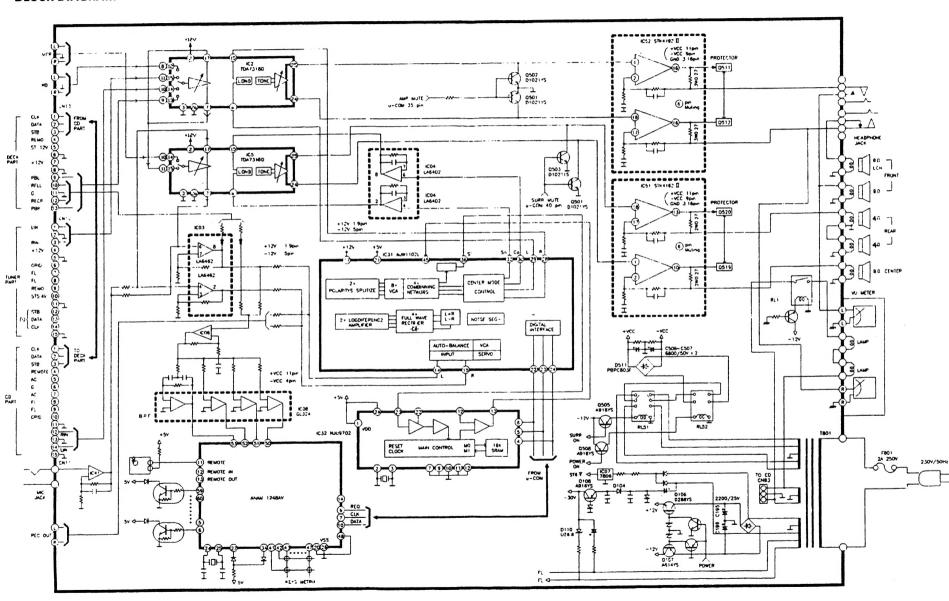
Abschaltautomatik

Dieses Bausteinset besitzt eine Abschalt-automatik, um eine Überlastung des Verstärkerteils zu vermeiden. Hat sich die Anlage automatisch abgeschalten, so schalten Sie mit der Taste POWER (6) die Anlage ab.

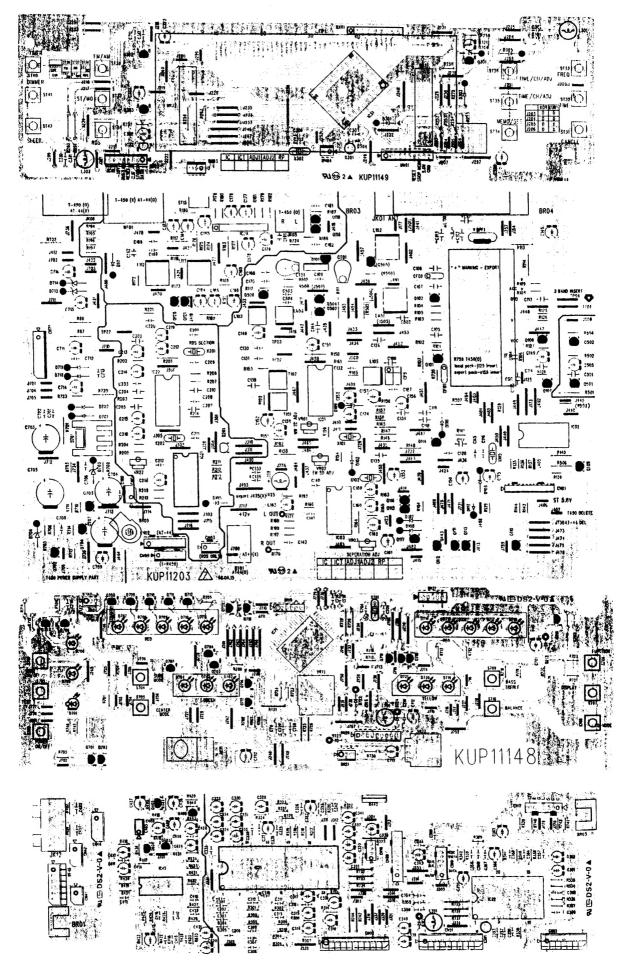
Nach ca. 5 Minuten können Sie die Anlage wieder anschließen und mit der Taste POWER @ einschalten.

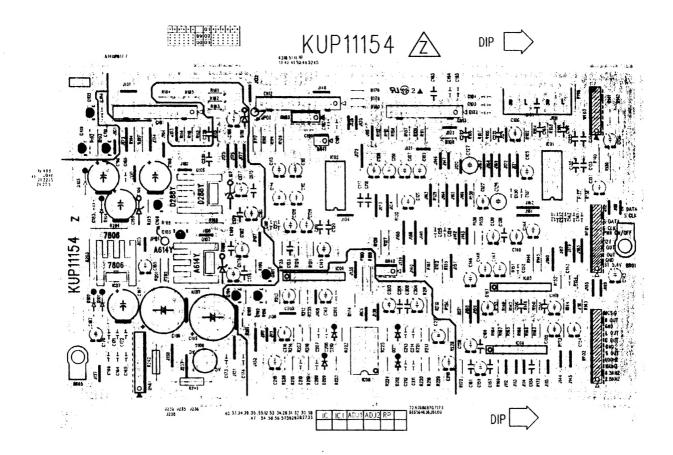


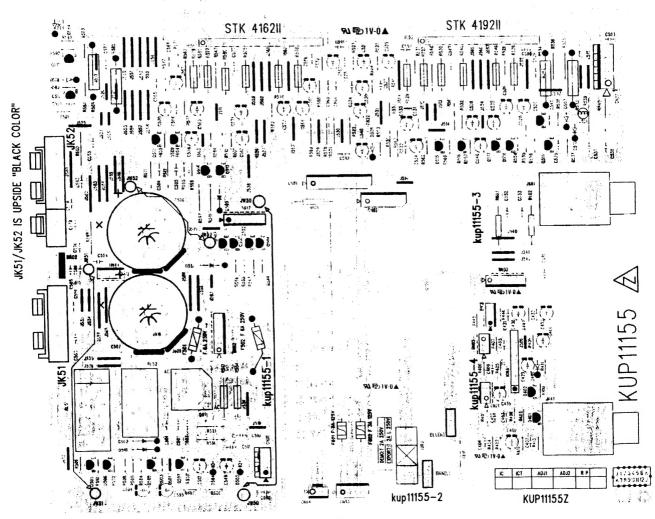




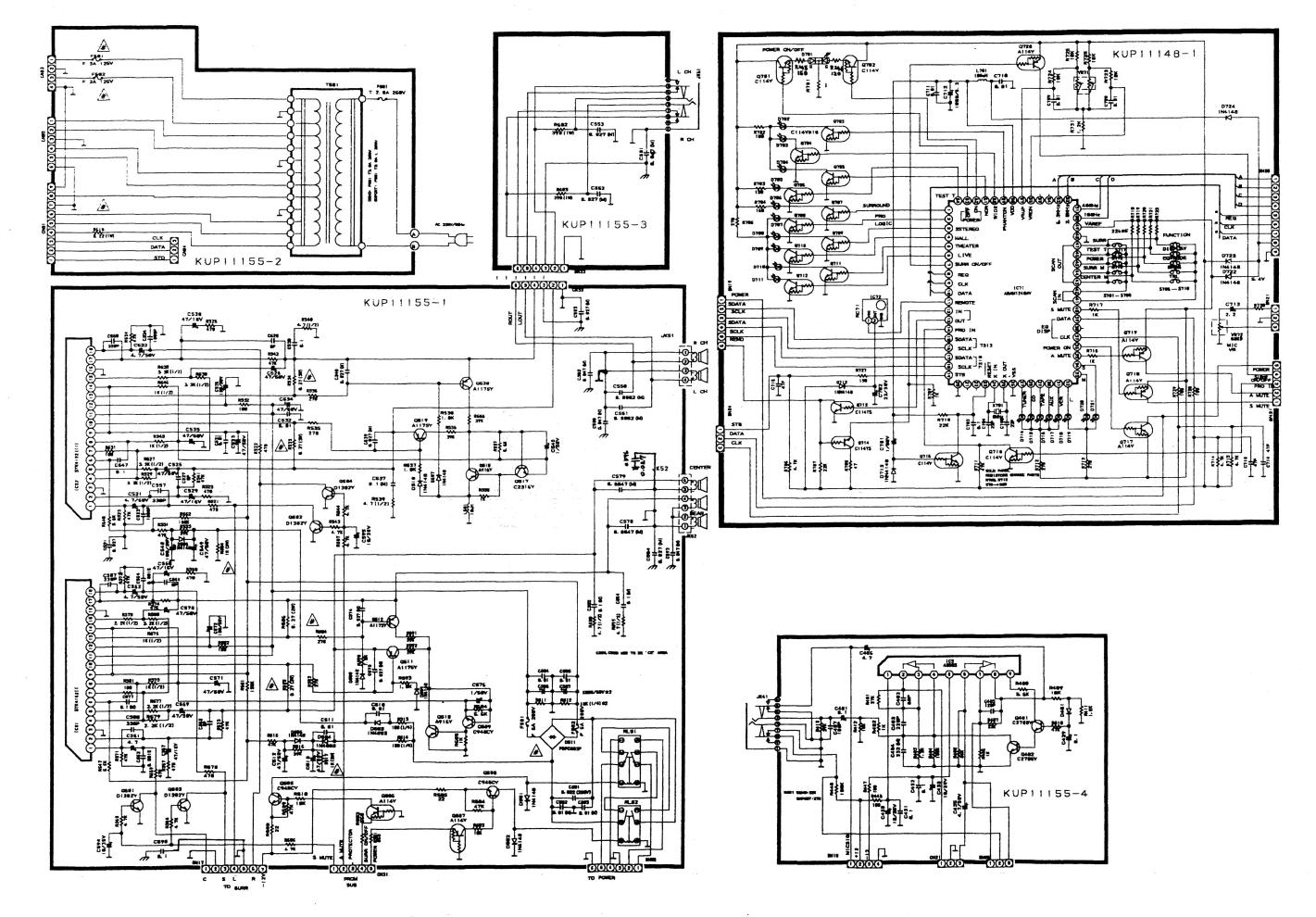
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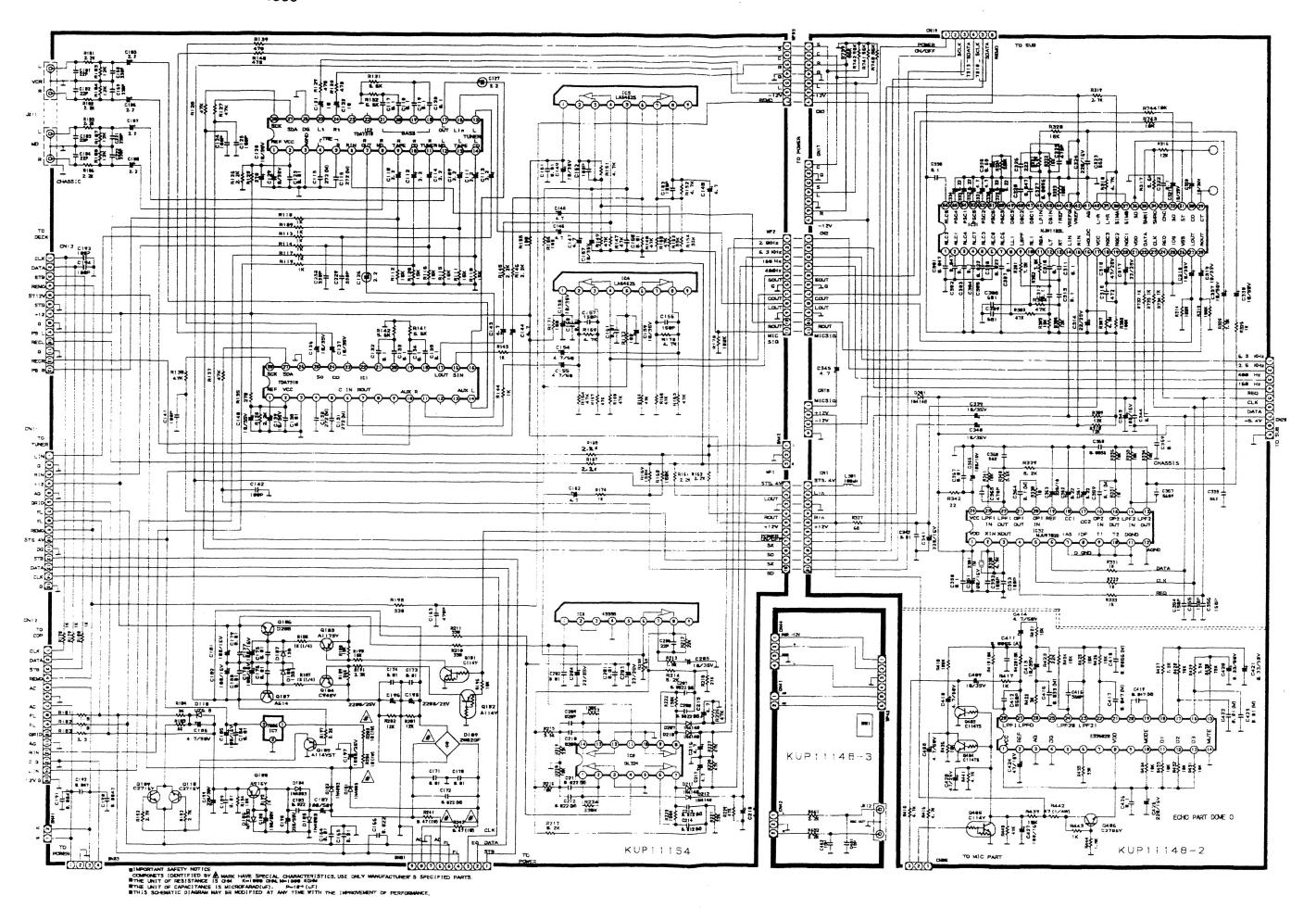


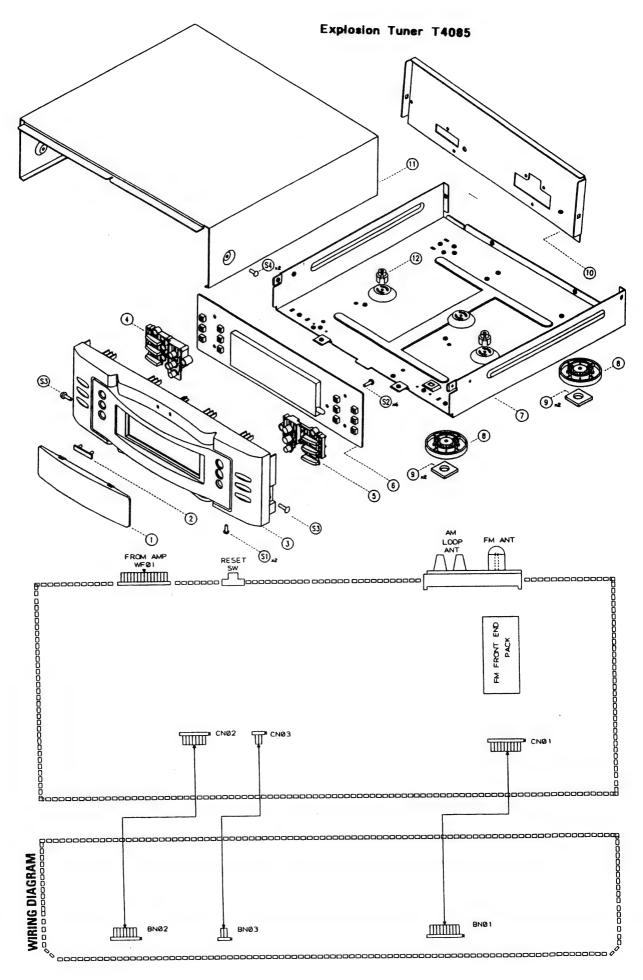


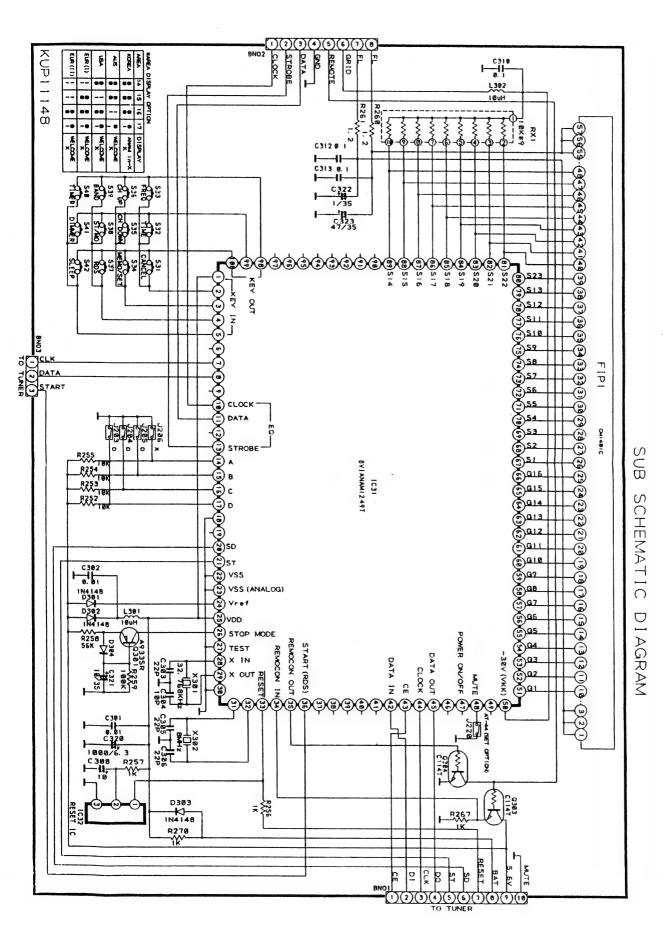


SCHEMATIC DIAGRAM Verstärker V4085





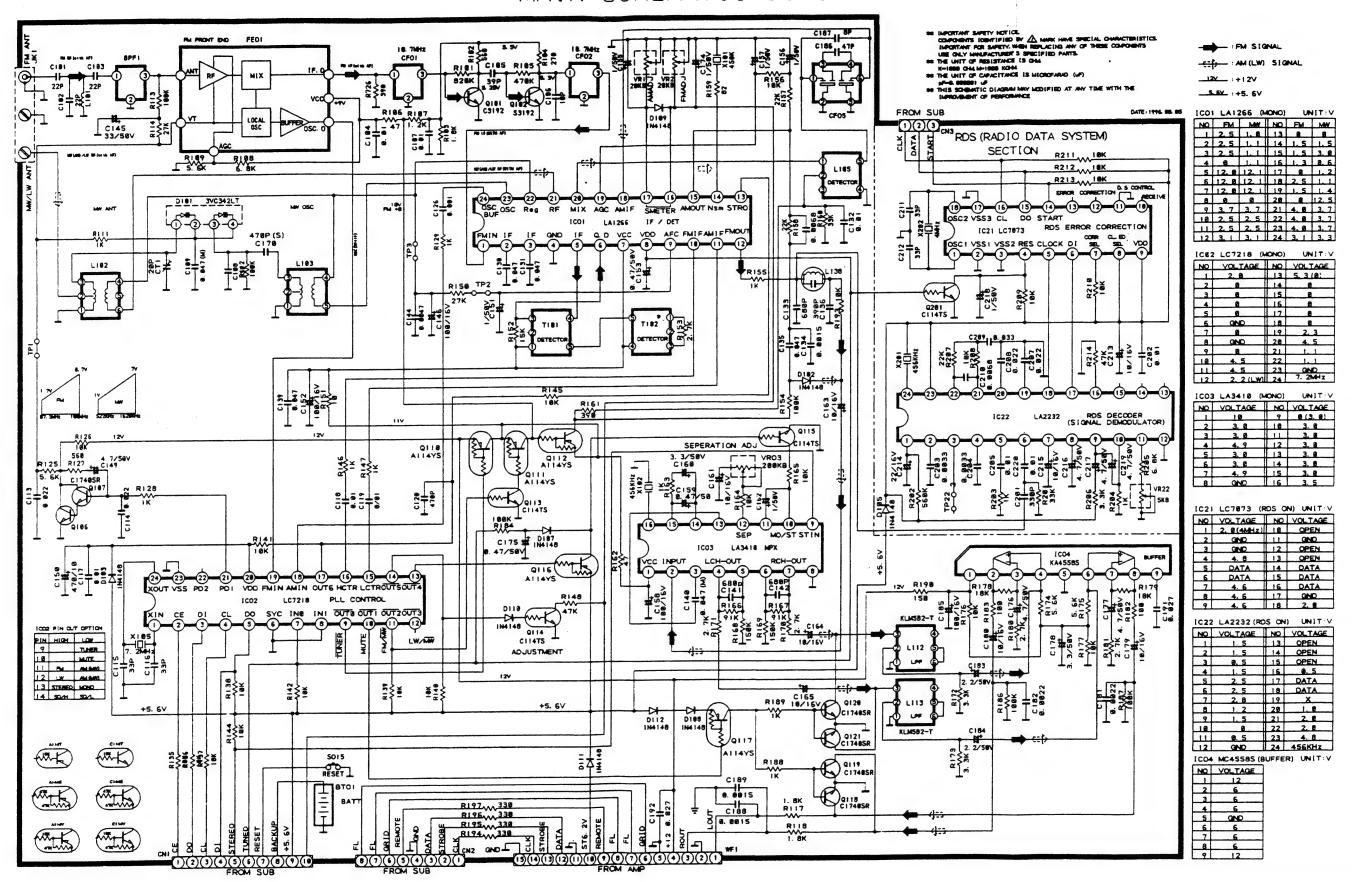


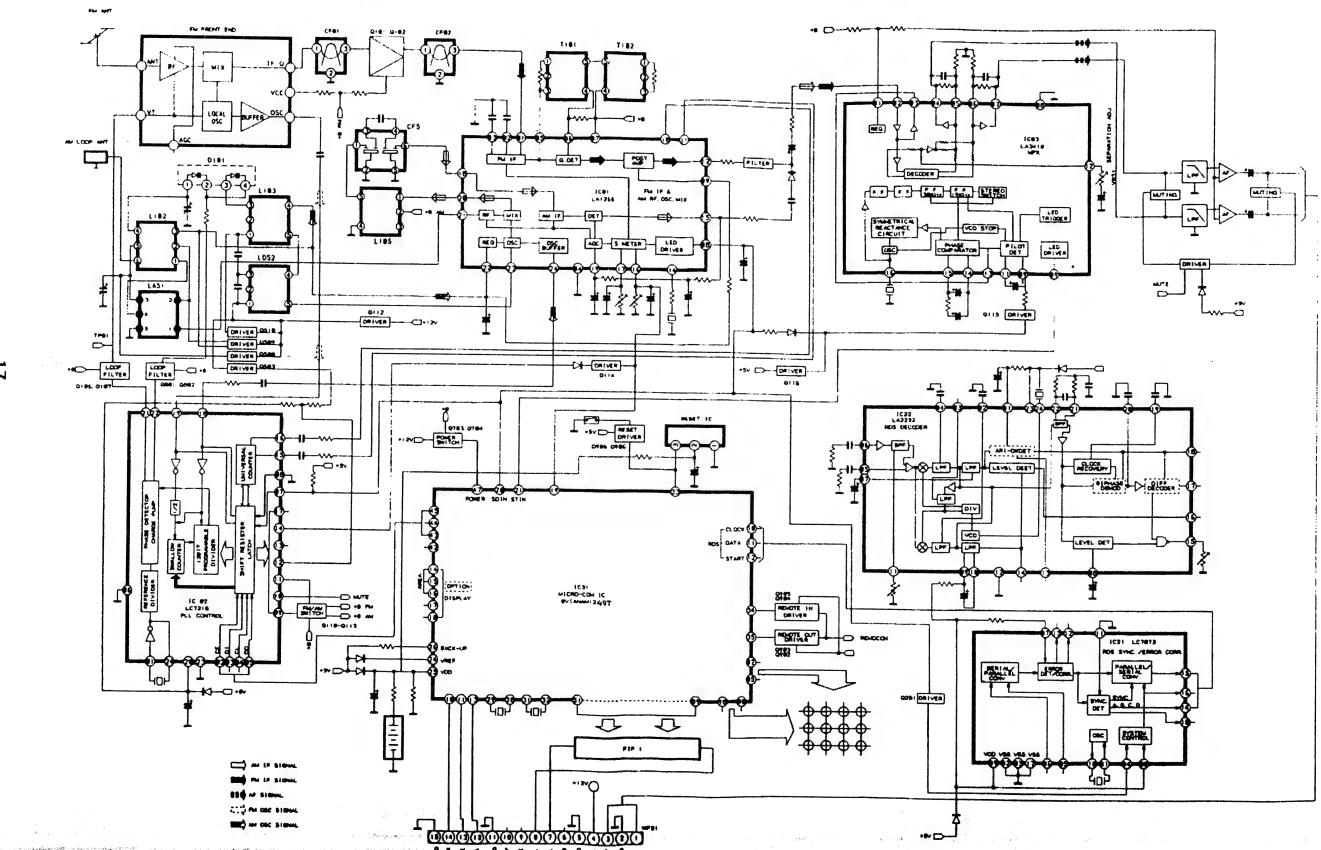


14

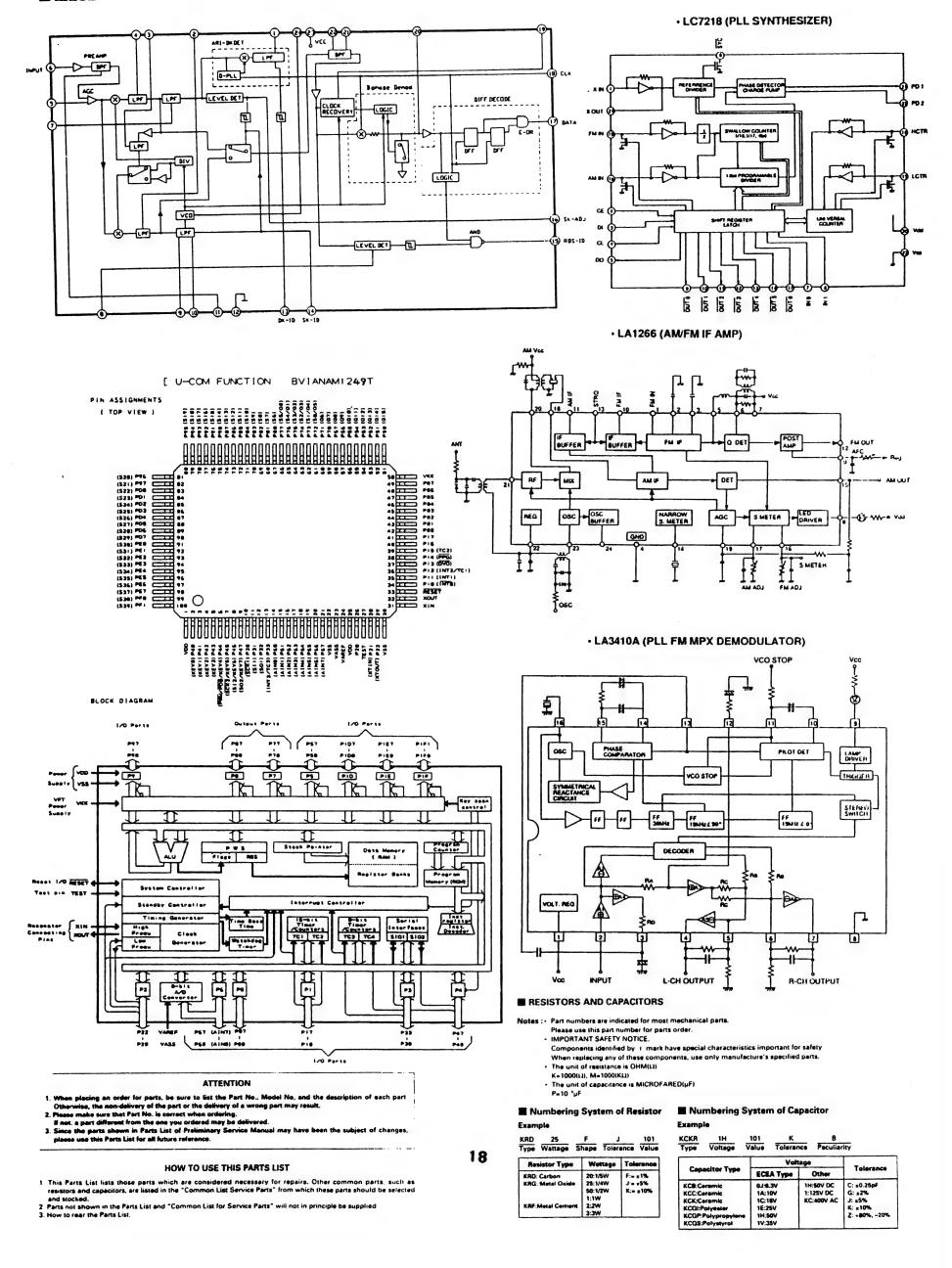
EL 09600 / DBLICK 3

MAIN SCHEMATIC DIAGRAM





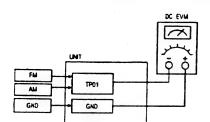
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1.TUNING FREQUENCY RANGE ADJUSTMENTS

(AM)

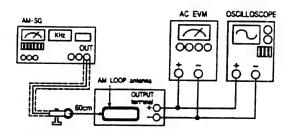
DC VOLTMETER CONNECT TO TEST POINT TP1 and GND DC VOLTMETER CONNECT TO TEST POINT TP1 and GND



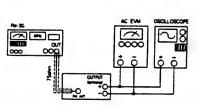
NO.	Band	Frequency	Adjust for	Adjustment
1	FM	87.50MHz	1.5V	L4
2	AM	522KHz	1V	L103

2.AM TRACKING ADJUSTMENT

BAND	Step	Frequency	Adjust for	Adjustment
	1	612KHz	Maximum sensitivity	L102
AM	2	1503KHz	Maximum sensitivity	СТ01
	3		Repeat steps 1 and 2 several time	PS.



3.FM-RF ADJUSTMENT



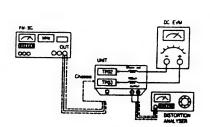
NO.	Frequency	Adjust for	Adjustment	
1	90.10MHz	Maximum Sensitivity	L1, L2, L3	
2	Repeat step 1 several times.			

4.FM MONO DISTORTION ADJUSTMENT

DC VOLTMETER. ..Connect to TP02(-), TP03(+)

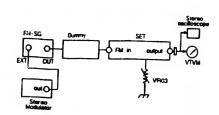
..Connect to FM ANT Jack (FM IN) through the dummy. Signal Generator

Distortion MeterConnect to the output.



NO.	Frequency	Adjust for	Adjustment
1	100.10MHz	DC Voltmeter 0V	T101
2	100.10MHz	Minimum T.H.D	T102
3	Repeat steps 1	and 2 several times.	

5. FM STEREO SEPARATION



Pilot signal	Adjust for	Adjustment
ON	Different of R and L must be maximum	VR03

NOTE : In case of adjusting the stereo separation, of input is L (or R) channel, R (or L) channel must be maximum.

■ ALIGNMENT INSTRUCTIONS

EQUIPMENT NEEDED:

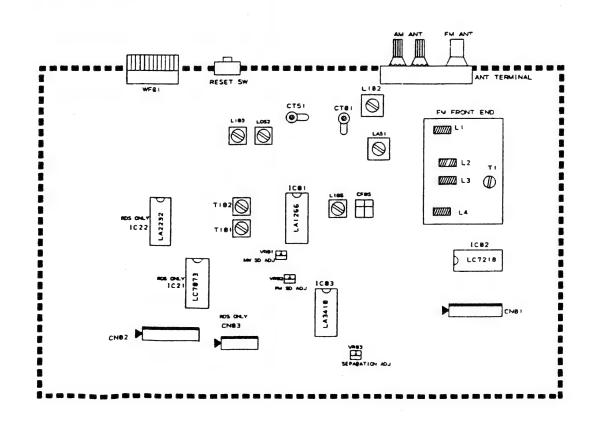
AM Signal Generator FM Signal Generator Oscilloscope VTVM(AC, DC) Test loop antenna (MW Adjustment)
Dummy antenna (FM Adjustment) Stereo signal modulator Distortion analyser

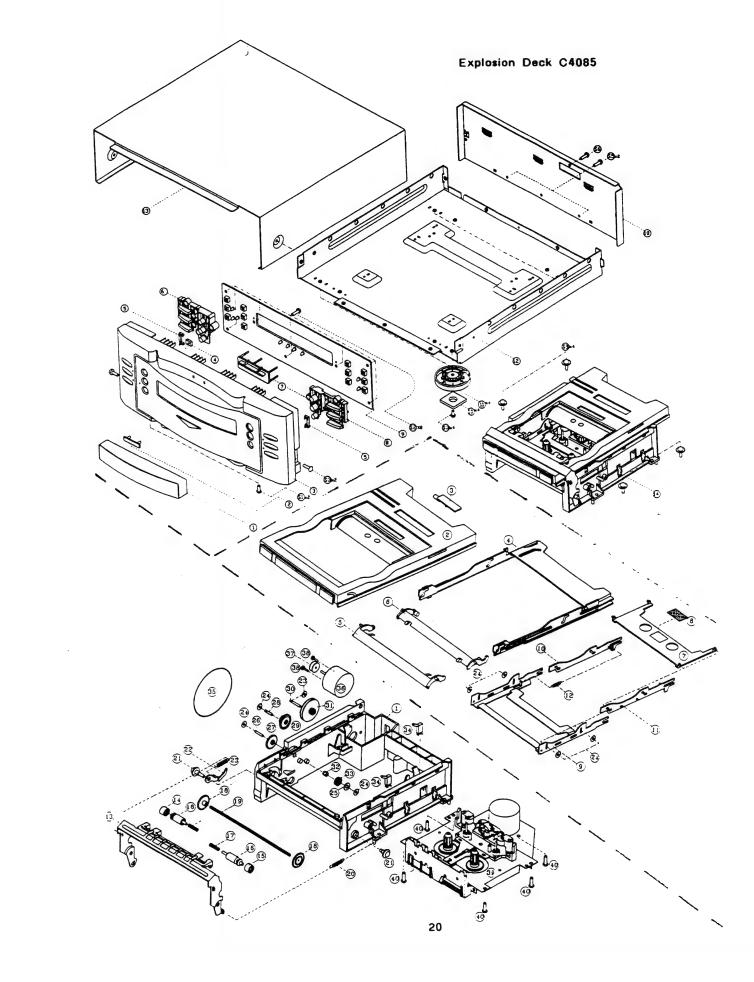
IMPORTANT

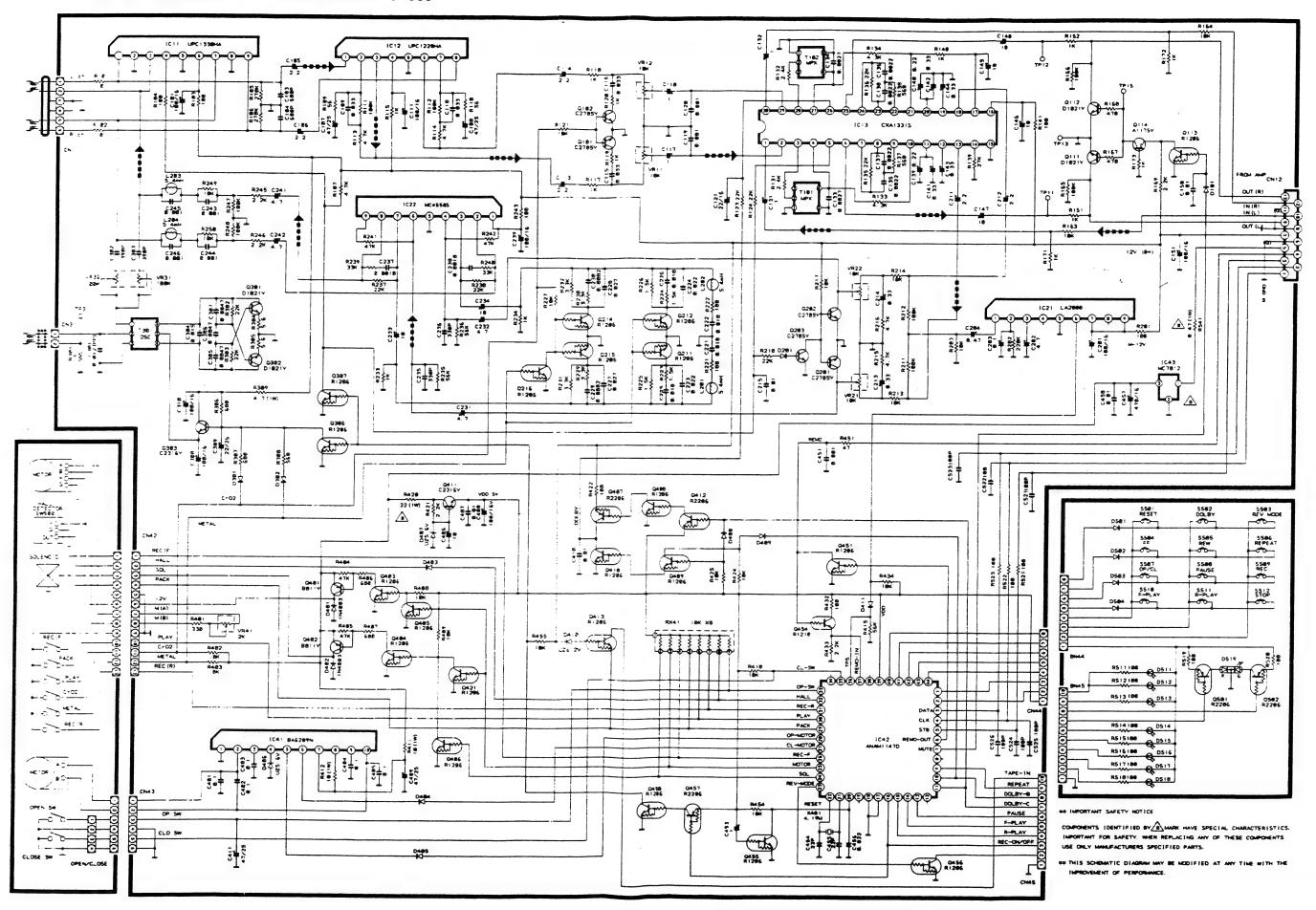
- 1. Check power-source voltage.
- 2. Set the function switch to band aligned.
- 3. Keep the signal input as low as possible to adjust accurately.
- 4. Modulation and modulation frequency.

Band Item	Modulation	Modulation frequency
AM	30%	400Hz
FM	100%(75KHz Dev.)	400Hz

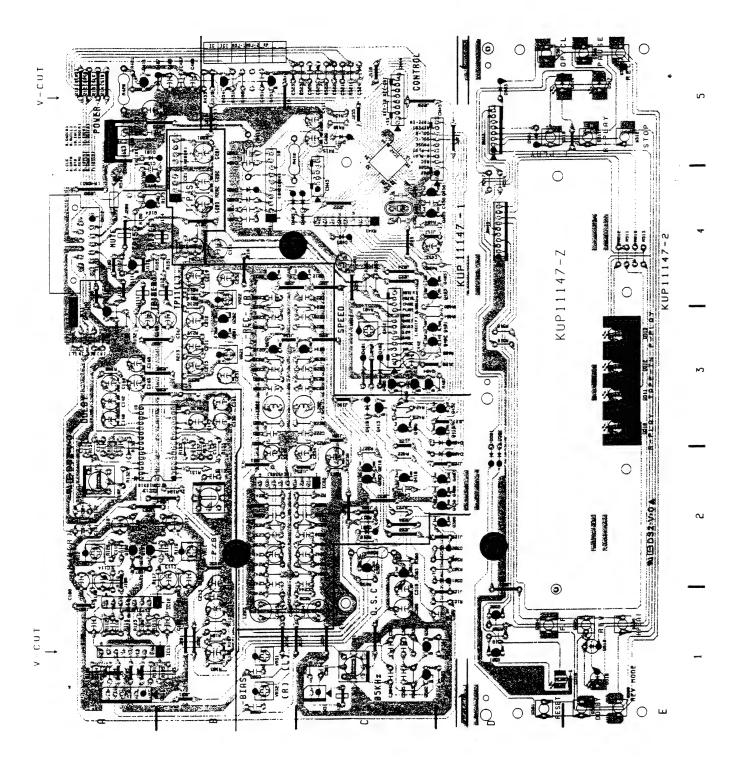
ADJUSTMENT POINT



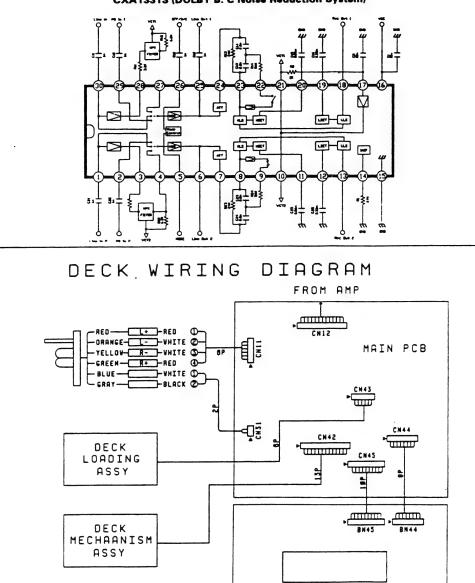




PRINTED CIRCUIT BOARDS

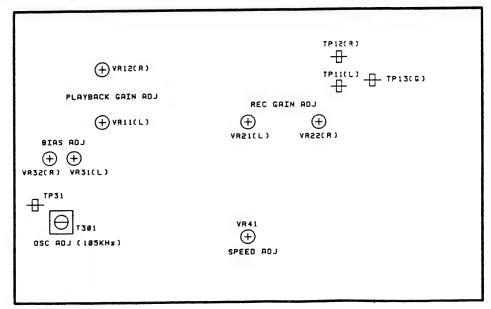


CXA1331S (DOLBY B. C Noise Reduction System)



DECK ADJUSTMENT POINT

SUB PCB .



Measurement condition

- · Dolby NR position: OFF
- · Make sure heads are clean
- · Make sure capstan and pressure roller are clean.

MEASURING INSTRUMENTS

- EVM(Electronic Voltmeter)
- Oscilloscope
- · Frequency counter
- Frequency co
 AF Oscillator
- DC Voltmeter
- ATT(Attenuator)
- Resistor (600Ω)

Test tape

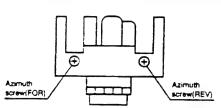
- · Head azimuth (10KHz, -10dB): MTT-114N
- Tape speed(3KHz, -10dB): MTT-111N
- Playback frequency response (125Hz, 1KHz, 10KHz, -10dB)
- Playback gain: MTT-150
- Blank tape

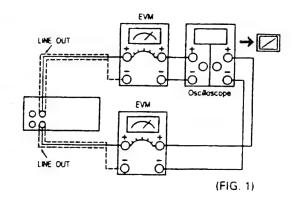
Normal blank tape: STT-5513 CrO₂ blank tape: STT-5563

Metal blank tape: STT-5573

HEAD AZIMUTH ADJUSTMENT

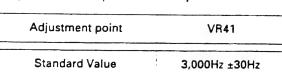
- 1. Test equipment connections are shown in fig. 1.
- Playback the head Azimuth test tape and regulate the angle adjust screw so that the cutputs of L-ch and R-ch are maximized. (When the adjusting positions are different with L-ch and R-ch, find a position where the outputs of L-ch and R-ch are balanced and then make the adjustment.)
- 3. At the same time, obtain a lissajous waveform and eliminate phase deflection.
- After the adjustment, apply screw lock to the angle adjusting value.

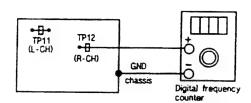




TAPE SPEED ADJUSTMENT

- 1. Test equipment connections are shown in fig. 2.
- 2. Playback the middle part of the test tape.

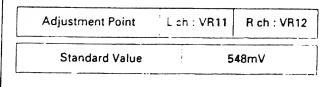


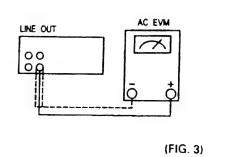


(FIG. 2)

PLAYBACK GAIN ADJUSTMENT

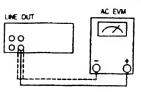
- 1. Test equipment connections are shown in fig. 3.
- 2. Playback the playback gain test tape. (MTT-150).
- 3. Adjust playback gain.



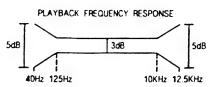


PLAYBACK FREQUENCY RESPONSE

- 1. Testequipment connections are shown in fig. 4.
- 2. Playback the playback frequency response test tape.
- 3. Check that the frequency response is within the range shown in Fig. 5 for both L-ch and R-ch.



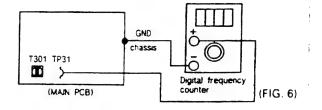
(FIG. 4)



(FIG. 5)

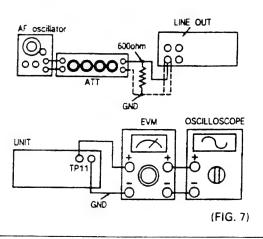
BIAS FREQUENCY ADJUSTMENT

- 1. Test equipment connections are shown in fig. 6.
- 2. Load a CrO₂ blank test tape.
- 3. Press the record and pause button.
- 4. Adjust T301 for 105KHz frequency counter reading.



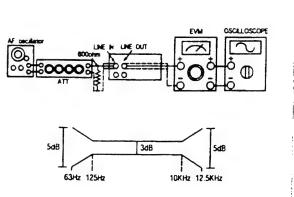
OVERALL GAIN ADJUSTMENT

- 1. Test equipment connections are shown in fig. 7.
- 2. Insert the normal reference blank tape.
- 3. Place UNIT into recorde mode.
- Supply a 1KHz signal through ATT (-10dB) from AF oscillator to line in.
- 5. Adjust ATT until monitor level at TP11 (L-ch) or TP12 (R-ch) becomes 180mV.
- Playback recorded tape and make sure that the output level at TP11 (L-ch) or TP12 (R-ch) becomes 180mV.
- 7. If measured value is not 180mV, adjust it by using VR21 (L-CH) or VR22 (R-CH).
- 8. Repeat from step (2).



OVERALL FREQUENCY RESPONSE

- Set a normal blank tape (STT-5513) and record by apply signal (100Hz, 1KHz, 10KHz) through ATT-from AF oscillator to line in (Line out Level: 33mV).
- 2. Playback the signal recorded in step 1, and check that the level of each output frequency in within the range shown in fig. 8 in comparison with the reference frequency (1KHz).
- If it is not within the standard range adjust the bias current by using VR31 (L-CH) or VR32 (R-CH) so that the frequency level is within the standard.
- Level up in high frequency range...Increase the bias current.
- Level down in high frequency range...Decrease the bias current.
- 4. After that, increase the signal recorded on CrO₂ blank tape (STT-5563) and metal blank tape (STT-5573) up to 14KHz and adjust in the same way as mentioned above and check that the frequency level is within the range shown in Fig. 8.



(FIG. 8)

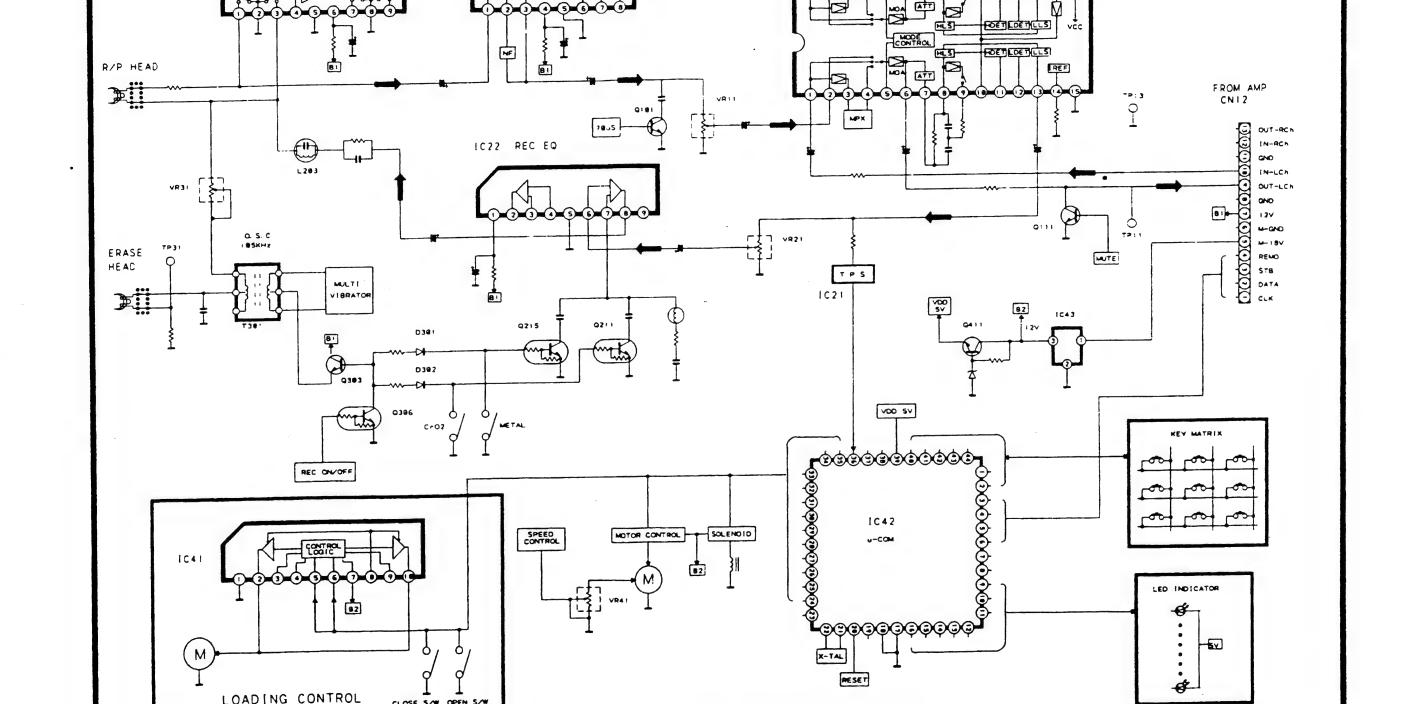
25

ICII R/P SW

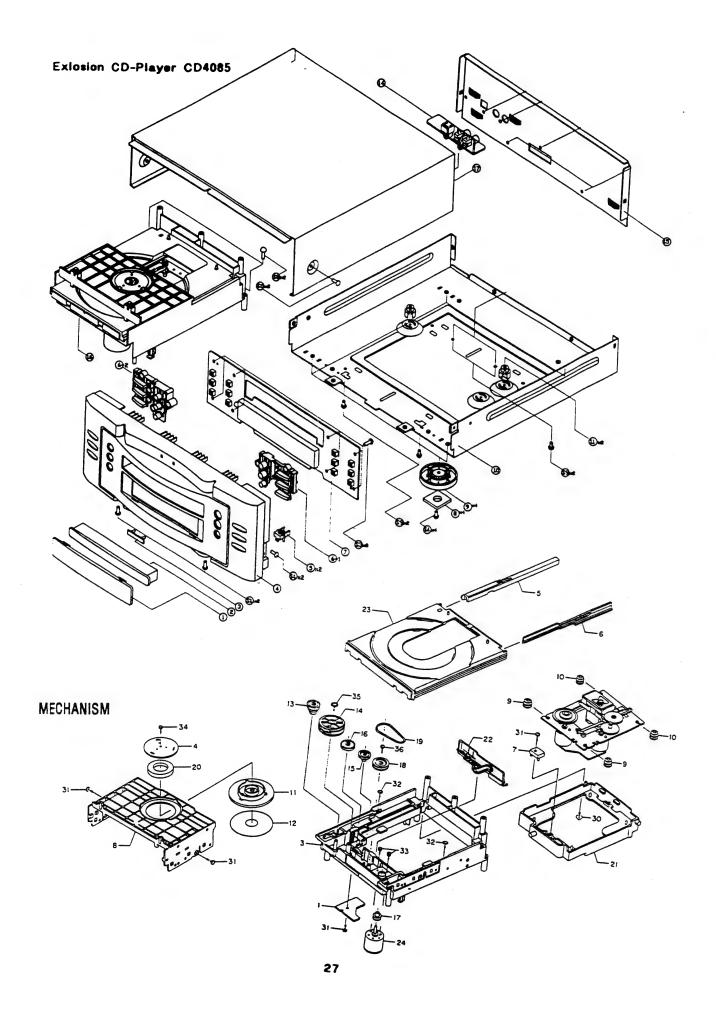
LOADING CONTROL

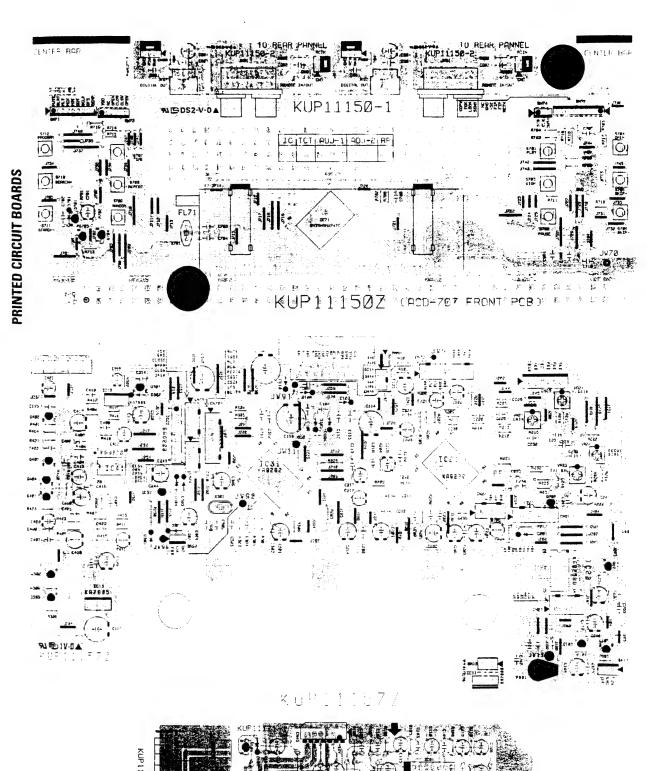
CLOSE S/W OPEN S/W

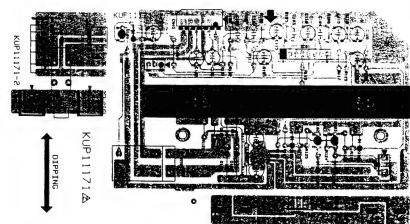
ICI2 P/B EQ

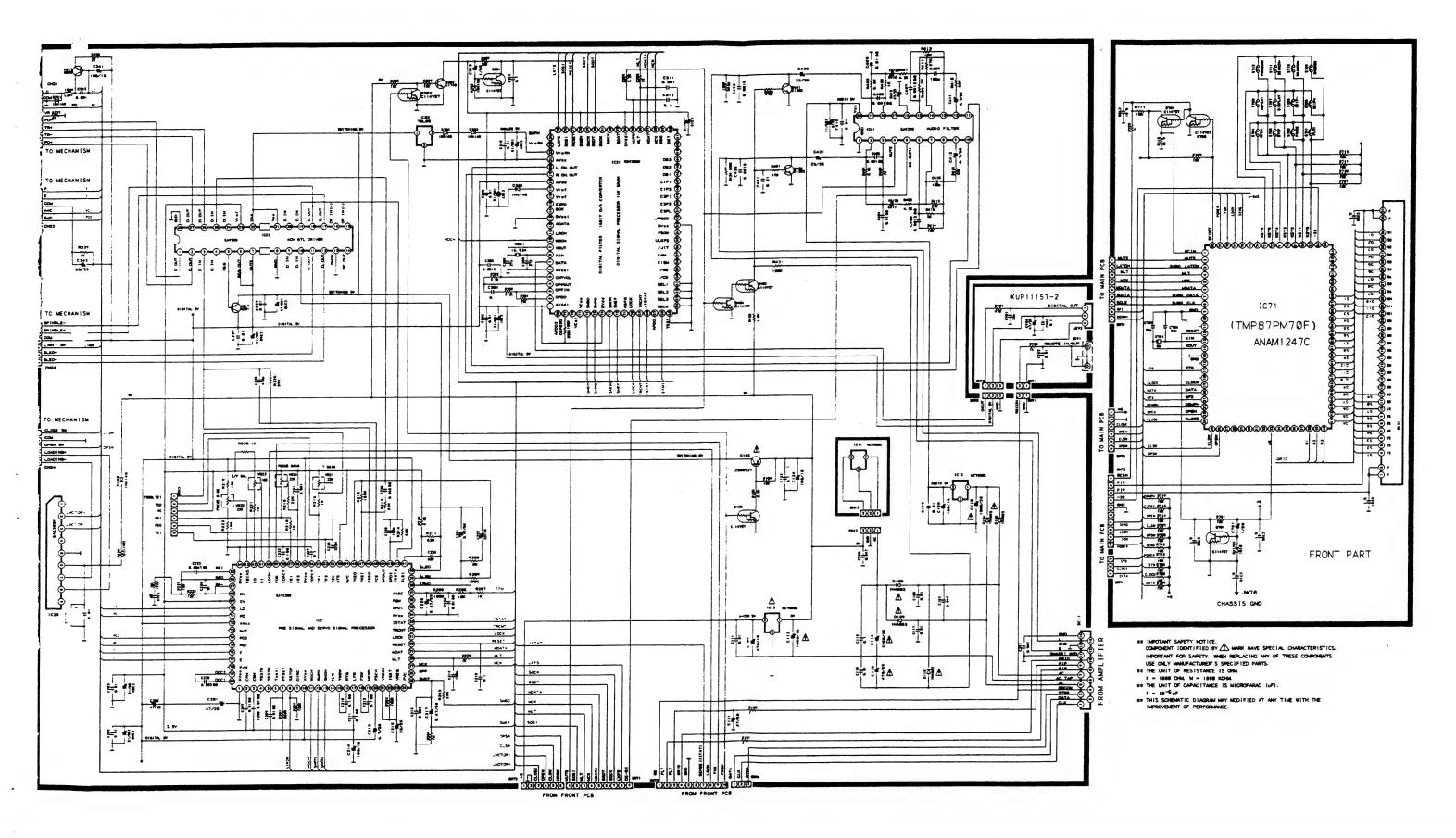


IC13 DOL8Y

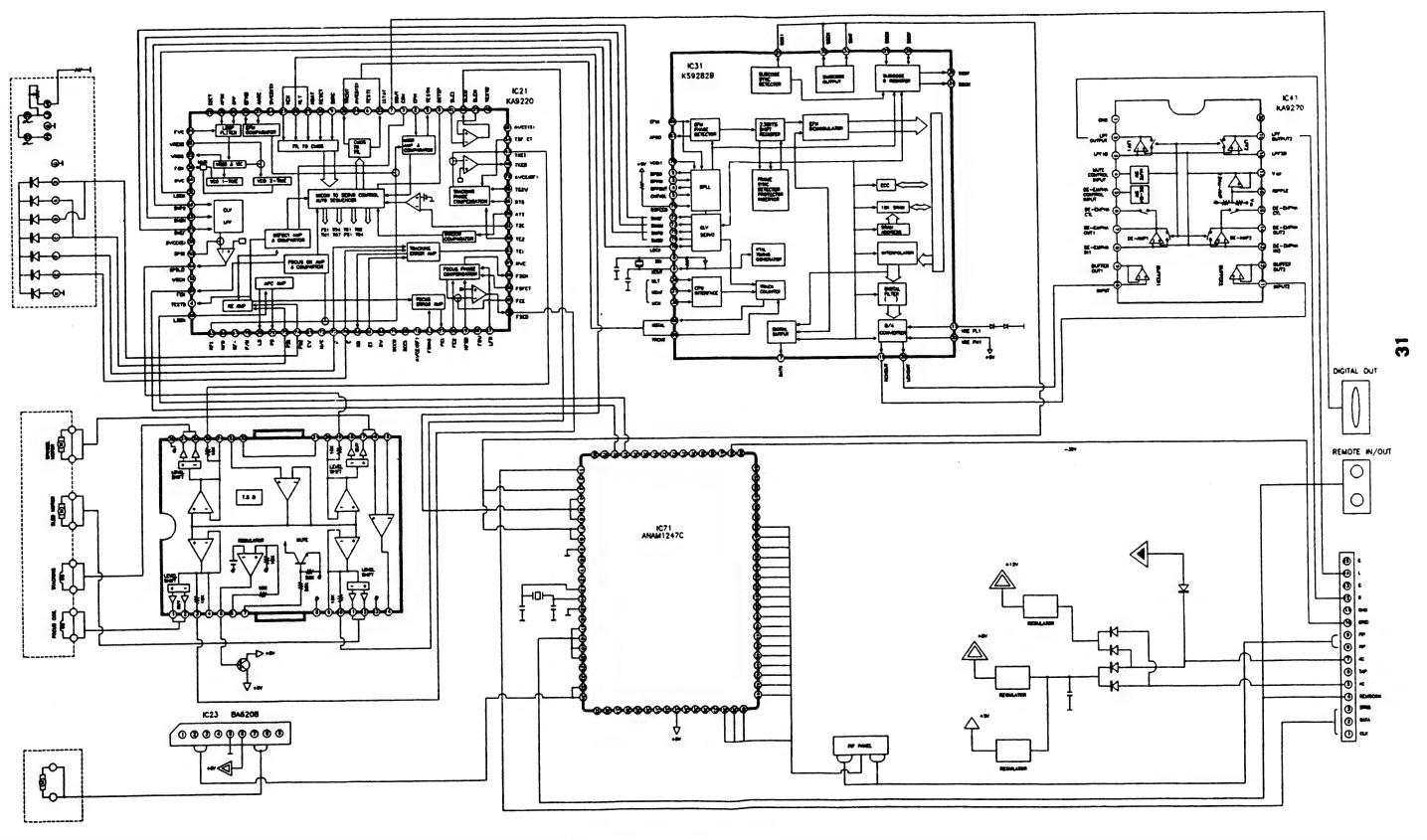








BLOCK DIAGRAM

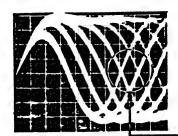


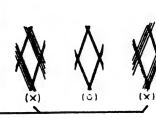
CD-bisher CD4082

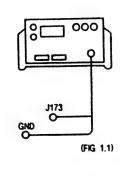
MEASUREMENTS AND ADJUSTMENTS

FOCUS OFF SET ADJUSTMENT

- 1. Test equipment connection is shown in Fig 1.1
- 2. Play the test disc.
- 3. Adjust (VR22 so that the eye pattern of RF Signal is open widest. (Fig 1.2)



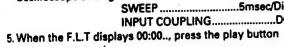


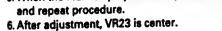


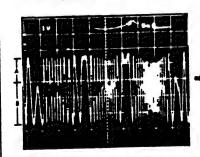
E/F BALANCE ADJUSTMENT

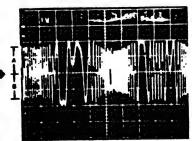
- Position the baseline trace of the oscilloscope to the center horizontal graticule line.
- Oscilloscope setting: VOLT1V/Div SWEEP2msec/Div
- 2. Turn on the power switch and play the track 1 of test
- 3. Connect the oscilloscope to R216 (Pin 53 of the IC 21)
- (See Fig 2.1).
 4. Short the VR21 Turn Fully clockwise, adjust the VR23 so that A=B (See Fig 2.2).

Oscilloscope setting: VOLT1V/Div SWEEP5msec/Div



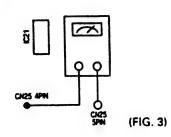






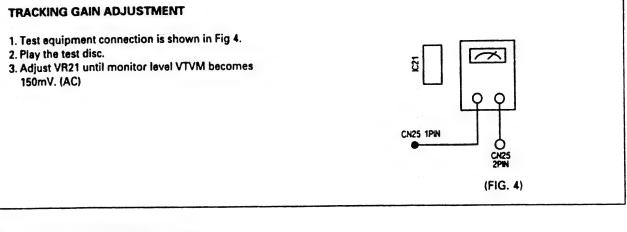
FOCUS GAIN ADJUSTMENT

- 1. Test equipment connection is shown in Fig 3.
- 2. Play the test disc.
- 3. Adjust VR24 until monitor level at VTVM becomes 200 mV. (AC)

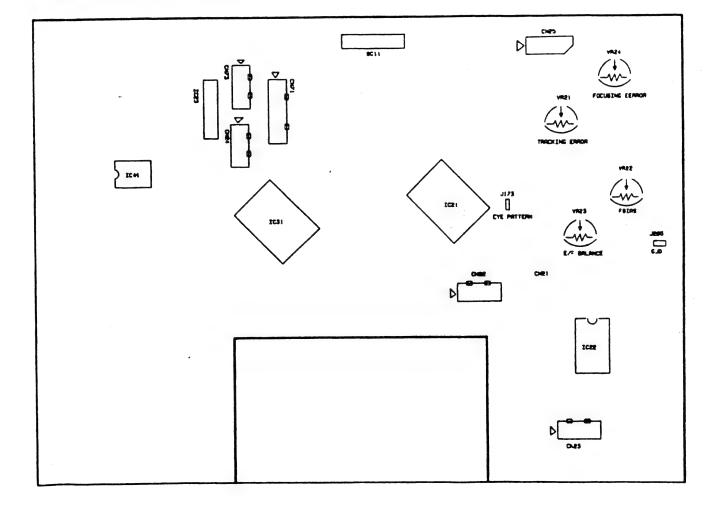


IC21

(FIG 2.1)



ADJUSTMENT POINT



N

KS9282B (DSP + DAC)

PIN No.	SYMBOL	1/0	DESCRIPTION
	UPOO	-	Charge pump output for master PLL
3	DPFIN		Filter input for master PLL
1	DPFOUT	0	Filter output for master I'LL
ъ :	CNTVOL	† 1	VCO control voltage for master PLL
6	AVSS1	T	Analog Ground 1
7	DATX	0	Digital audio output
8	XIN	1	X-tal nacillator input
9	XOUT	0	X-tal oscillator output
10	Winch		Ward clook of 48 bit/SLOT
10	WDCH	. 0	(Normal speed-88.2KHz, Double speed-176.4KHz)
,,	LRCH	0	Channel clock of 48 bit/SLOT
			(Normal spond=44.1KHz, Double speed=88.2KHz)
12	ADATA	0	Serial audio data output of 48 bit/SLUT (MSB first)
13	DV581	<u> </u>	Dignal Ground 1
14	8CK	, 0	Audio data Bit clock for 48 bit/St.OT
15	CZPO	10	(Normal speed-2.1168KHz, Double speed-4.2336KHz) C2 pointer for output audio data
16	VREFL2	+	Input terminal 2 of reference voltage "L" (Floating)
17	VREFLI	 	Input terminal 1 of reference voltage "L" (GND Connection)
18	AVDD2		Aneiga VCC2
19	RCHOUT	1 0	Right-Channel audio output through D/A Converter
20	LCHOUT	0	Left-Chennel audio output through D/A converter
21	AVSS2	1	· Analog Ground 2
22	VREFHI	+	Input terminal 1 of reference voltage "H" (VDD connection)
23	VREFH2	 	Input terminal 2 of reference voltage "H" (Floating)
24	ЕМРН	; 0	Emphasis/Non-Emphasis Output ("H": Emphasis)
25	LKFS	10	The Lock Status output of frame sync
26	5051	0	Output of subcode sync signal ISO + S1)
27	RESET	1	System reset at "L"
28	SQEN	 	SQCK VO Control ("L": Internal CK, "H": external CK)
29	SQCK .	vo	Clock for output Subcode-Q data
30	SQDT	0	Serial output of Subcode-Q data
31	SQOK	0	The CRC check result signal output of subcode-Q
32	SBCK	1	CLOCK for output subcode-Q data
33	SDAT	0	Subcode serial data output
34	DVDD1		Digital Vcc1
35	MUTE	1 1	Mute control Input ("H": Mute ON)
36	MLT	1_1_	Latch Signal Input from Micom
37	MDAT	1	! Strial data Input from Micom
38	MCK	1	Serial Clock input from Micorn
39	OBS	l vo	SRAM data VO Port 8 (MSB)
40	OB1	1/()	SRAM data VO Port 7
41	DB6	CN	SRAM data I/O Port 6
42	DBS	VO	SRAM dain I/O Port 5
43	DB4	I/O	SRAM data I/O Port 4
44	083	vo	SRAM date I/O Port 3
45	DB2	VO	SRAM data I/O Port 2
46	DB1	. 10	SRAM data I/O Port 1 (LSB)
47	CIFI	10	Monitoring output for C1 error correction (RA1)
48	G1F2	I/O	Manituring autput for C1 error correction (RA2)
49	C2F1	vo	Monitoring output for C2 error correction (RA3)
50	C2F2	100	Menitoring output for C2 error correction (RA4)
			C2 decoder flag
51	C2FL	! vo	(High: When the processing C2 code is impossible correction state) RA5)
52	PBCK	vo	Output of VCO/2
	, DV		(Normal speed-4.3218MHz, Double speed -8.0435MHz) (FIA6)
83	DV ₃₅₇		Digital Ground 2
54	FSDW	1 1/0	Unprotected frame sync (RA7)
55	ULKFS	1/0	Frame sync protection state (RA8)
56	/JIT	VO	Display of either RAM overflow or underflow for ±4 frame Juter margin (RA9)
67	C4M	1/0	Only monitoring signal (Normal playback: 4.2336MHz) (RA10)
58	C16M	VO.	16.9344MHz signal output (RA11)
59	WE	VO	Terminal for test
60	/CS	1 1/0	Terminal for tost
61	SEL1		Mode Selection Terminal 1 (H:33.8688MHz, L:16.9344MHz)
62	SEL2	1	Made Selection Terminal 2 (H:APLL L:DPLL)
63	SEL3		Mode Selection Terminal 3 (H: CD ROM L:CDP)
64	SEL4	1	Mode Selection Terminal 4 (L: Internal SRAM)
65	TEST	1	Test Terminal (LaNormal operating state)
66	EFMI		EFM Signal input
67	APDO	. 0	Charge Pump output for analog PLL
68	ASTAT	0	The Internal status output
69	TRONT	1	Tracking counter Input signal
<u> </u>			Output signal of LKFS Condition sampled PBFR/16
70	LOCK	. 0	(If LKFS is "H", Lock is "H"
	1	•	If the LKFS is sempled "L" at least 8 times by PBFR/18, Lock is "L")
71	PBFR	0	Write frame clock (Lock: 7.35KHz)
72	SMEF	0	LPF time constant control of the spindle servo error signal
14	SMON	-	
77	, amun	<u> </u>	ON/OFF control signal for spindle servo
73	DV	1	Digital Vcc 2
73 74	DV _{DD3}		0-1-4-14-14-1-4-1
74			Spindle Motor drive
	DV _{DD2}	0	(Rough control in the CLV-S mode
74	SMPD		
74	SMPD SMSD		(Rough control in the CLV-S mode
74	SMPD		(Rough control in the CLV-S mode Phase control in the CLV-P mode)
74 75 76	SMPD SMSD		(Rough control in the CLV-S mode Phase control in the CLV-P mode) Spindle Motor drive (Velocity control in the CLV-P mode)
74 75 76 11	SMPD SMSD VC ₀₀₁	0	(Rough control in the CLV-S mode Phase control in the CLV-P mode) Spindle Motor drive (Velocity control in the CLV-P mode) Vco output signal (When the state is lock by means of PBFR, it is 8,843MHz)

KA9220B (RF + SERVO AMP)

	SYSTEM	DESCRIPTION
1 -	AVEE (R)	Analog negative power supply input pin for RF part
	CPH	Capacitar connection pin of mitror hold,
	TESTD	Capacitor connection pin of defect bottom-notid Defect test pin
5	TESTM	Mirror test pin
6	Tout1	Input pin for test
		Pank fraquency setting pin for focus, tracking compensation and fo
7	PFSET	(cut off frequency) of CLV LPF.
	SSTOP	Chank the position pin of pick-up whether inside or not.
9	DIRC	Diract 1 Track jump Control Pin
10	AVCC (S)	Analog positive power supply input pin for SERVO part.
		Auto-sequencer clock-input pin
11	WDCH	(Normal speed)=88.2KHz, Double speed=176.4KHz)
12	SMPD	Connection pin of DSP SMPD
13	SMUN	Connection pin of DSP SMON, apindlo survo ON ut "H"
14	N/C	No connection pin
16	1GSW	Providing time constant to change the high frequency tracking gain
16	RTG	Capacitor connection pin to switch the tracking gain of high frequency
		Cepacitor connection pin to perform rising low bandwidth
17	LFR	of fincus servo loop
18	FSW	High frequency gain of focus servo loop can be changed by FS3
	rsw ,	switch ON or OFF
19	uron	Reducing high frequency gain with capacitor connected between
	HFGD	pin 18 and pin 19.
20	FSCH	Time constant external pin to generate focus search waveform
21	VREGI	External regulator voltage input pin for VCO
22	ISET	Daterming the peak value of focus search, track jump and SLED kick
23	VREG	3.5V Regulator output pin
24	,FVC	Pin connected external resistor to adjust free running frequency of VCO
25	SMEF	Providing an external LPF time constant of CLV SERVO Loop
26	BPE	Providing time constant for Loop filter of VCQ
27	MCK	Clack input pin from micom
28	MLT	Latch Input pin from micom
29	MDAT	Date input pin from micom
30	RESET	Reset Input pin from micom, reset at "L"
31	LOCK	Pin for operation of the sled runaway prevention function at "L"
32	TRONT	Track count output pin
33	ISTAT	Internal status output pin
34	AVEE (S)	
35	APDI	Analog negative power supply input pin for SERVO part
	737 371	Input pin of DSP phase comparison output (PHAS)
36	FBM	Output pin of analog VCO
37		Normal speed=8.64 MHz, Double speed=17.28MHz
	AASC	. Auto Asymmetry control input pin
38	EFMO	EFM comparator output pin
39	SLEN	Non-inverting input pln of SLED SERVO emplifier
40	SLEO	Output pin of SCED SERVO amplifier
41	SLEI	Inverting input pin of SLED SERVO amplifier
		Test input pin to change speed mode
12	TEST2	Normal speeds"H", Double speeds"L"
43	SPDI	
44	SPOLO	mosting lubric bit of abjudia selvo stubilities
	*	Spindle servo amplifier output pin
45	FCE	Inverting input pin of focus serve emplifier
48	FSEO	Output pin of focus servo amplifier
47	TKEI	Non-inverting Input pin of tracking serve amplifier
48	TKEO	Output pin of tracking servo emplifier
49	N/C	No connection
50	STA	Anti-shock input pin
51		
	TZC	Tracking Zero Crossing input nin
52	TE2	Tracking Error Surve input pin
53	TE 1	Output pin of tracking Error Ampillier
54	TUFCT	Constitution of the second of
		Capacitor Connection pin for Defect Compensation of tracking serve
55	DVCC (S)	Uspacifor Connection pur for Defect Compensation of tracking serve Digital positive power supply input pin for serve part
55 56	DVCC (S) FE2	
56	FE2	Digital positive power supply input pin for servo part Focus error servo input pin
56 57	FE2 FE1	Digital positive power supply input pin for servo part Focus error servo input pin Output pin of focus error Amphilier
56 57 58	FE2 FE1 FDFCT	Digital positive power supply input pin for servo part Focus error servo input pin Output pin of focus error Amplifier Capacitor connection pin for defect compensation of focus servo
56 57 58 59	FE2 FE1 FDFCT FOK	Digital positive power supply input pin for servo part Focus error servo input pin Output pin of focus error Amphilier
56 57 58	FE2 FE1 FDFCT	Digital positive power supply input pin for servo part Focus error servo input pin Output pin of focus error Amplifier Capacitor connection pin for defect compensation of focus servo
56 57 58 59	FE2 FE1 FDFCT FOK	Digital positive power supply input pin for servo part Focus error servo input pin Output pin of focus error Amphilier Capacitor connection pin for defect compensation of focus servo Output pin of Focus ok compensator
56 57 58 59 60	FE2 FE1 FDFCT FOK LDON	Digital positive power supply input pin for servo part Focus error servo input pin Output pin of focus error Amphilier Capacitor connection pin for defect compensation of focus servo Output pin of Focus ok comparator Leser diode ON/OFF control pin
56 57 58 59 60	FE2 FE1 FDFCT FOK LDON EI	Digital positive power supply input pin for servo part Focus error servo input pin Output pin of focus error Amplifier Capacitor connection pin for defect compensation of focus servo Output pin of Focus ok comparator Leser diode ON/OFF control pin Feedback input oin of E I-V amplifier Output pin of E I-V Amplifier
56 57 58 59 60 61	FE2 FE1 FDFCT FOK LDON E1 E0 FBIAS	Digital positive power supply input pin for servo part Focus error servo input pin Output pin of focus error Amplifier Capacitor connection pin for defect compensation of focus servo Output pin of Focus ok comparator Laser diode ON/OFF control pin Feedback input oin of E I-V amplifier Output pin of E I-V Amplifier Bias pin of non-inverting input of focus error amplifier
56 57 58 59 60 61 62 63 64	FE2 FE1 FDFCT FOK LDON EI EO FBIAS DVEE (S)	Digital positive power supply input pin for servo part Focus error servo input pin Output pin of focus error Amplifier Capacitor connection pin for defect compensation of focus servo Output pin of Focus ok comparator Laser diode ON/OFF control pin Feedback input pin of E I-V amplifier Output pin of E I-V Amplifier Bias pin of non-inverting input of focus error amplifier Digital negative power supply input for servo part
56 57 59 59 60 61 63 64 65	FE2 FE1 FDFCT FOK LDON EI EO FBIAS DVEE (S) AFI	Digital positive power supply input pin for servo part Focus error servo input pin Output pin of focus error Amplifier Capacitor connection pin for defect compensation of focus servo Output pin of Focus ok comparator Laser diode ON/OFF control pin Feedback input oin of E-I-V amplifier Output pin of E-I-V Amplifier Bias pin of non-inverting input of focus error amplifier Digital negative power supply input for servo part Output Signal of RF summing amplifier is inputed through capacitor
66 57 58 59 60 61 782 53 64 65 86	FE2 FE1 FDFCT FOK LDON E1 EO FBIAS DVEE (S) RF1	Digital positive power supply input pin for servo part Focus error servo input pin Output pin of focus error Amplifier Capacitor connection pin for defect compensation of focus servo Output pin of Focus ox comparator Laser diode ON/OFF control pin Feedback input pin of E I-V amplifier Output pin of E I-V Amplifier Bias pin of non-inverting Input of focus error amplifier Digital negative power supply input for servo part Output Signal of RF summing amplifier is inputed through capacitor Output pin of RF summing amplifier
56 57 59 59 60 61 63 64 65	FE2 FE1 FDFCT FOK LDON EI EO FBIAS DVEE (S) AFI	Digital positive power supply input pin for servo part Focus error servo input pin Output pin of focus error Amplifier Capacitor connection pin for defect compensation of focus servo Output pin of Focus ok comparator Laser diode ON/OFF control pin Feedback input oin of E-I-V amplifier Output pin of E-I-V Amplifier Bias pin of non-inverting input of focus error amplifier Digital negative power supply input for servo part Output Signal of RF summing amplifier is inputed through capacitor
66 57 58 59 60 61 62 63 64 65 86 65	FE2 FE1 FDFCT FOK LDON E1 EO FBIAS DVEE (S) RF1	Digital positive power supply input pin for servo part Focus error servo input pin Output pin of focus error Amplifier Capacitor connection pin for defect compensation of focus servo Output pin of Focus ox comparator Laser diode ON/OFF control pin Feedback input pin of E I-V amplifier Output pin of E I-V Amplifier Bias pin of non-inverting Input of focus error amplifier Digital negative power supply input for servo part Output Signal of RF summing amplifier is inputed through capacitor Output pin of RF summing amplifier
66 57 58 59 60 61 42 63 64 65 66 07	FE2 FE1 FDFCT FOK LDON E1 EO FBIAS DVEE (S) AF1 RFO BF	Digital positive power supply input pin for servo part Focus error servo input pin Output pin of focus error Amplifier Capacitor connection pin for defect compensation of focus servo Output pin of Focus ox comparator Laser diode ON/OFF control pin Feedback input pin of E I-V amplifier Output pin of E I-V Amplifier Bias pin of non-inverting input of focus error amplifier Digital negative power supply input for servo part Output pin of RF summing amplifier is inputed through capacitor Output pin of RF summing amplifier Inverting input pin of RF summing amplifier Output pin of (AVCC + AVEEL/2 Voltage
66 57 E8 59 : 60 61 · 62 . 63 64 65 66 07 68	FE2 FE1 FDFCT FOK LDON E1 EO FBIAS DVEE (S) AF1 RFO BF- RV CV	Digital positive power supply input pin for servo part Focus error servo input pin Output pin of focus error Amplifier Capacitor connection pin for defect compensation of focus servo Output pin of Focus ox comparator Laser diode ON/OFF control pin Feedback input pin of E I-V amplifier Output pin of E I-V Amplifier Bias pin of non-inverting input of focus error amplifier Digital negative power supply input for servo part Output Signal of RF summing amplifier is inputed through capacitor Output pin of RF summing amplifier Inverting input pin of RF summing amplifier Output pin of (AVCC + AVEE)/2 Voltage Bias input pin of Center Voltage buffer
56 57 58 59 50 60 61 7 62 63 64 65 65 66 69 70	FE2 FE1 FDFCT FOK LDON EI EO FBIAS DVEE (S) RF1 RFO RF- RV CV LO	Digital positive power supply input pin for servo part Focus error servo input pin Output pin of focus error Amplifier Capacitor connection pin for defect compensation of focus servo Output pin of Focus ox comparator Laser diode ON/OFF control pin Feedback input pin of E I-V amplifier Output pin of E I-V Amplifier Bias pin of non-inverting Input of focus error amplifier Digital negative power supply input for servo part Output Signal of RF summing amplifier is inputed through capacitor Output pin of RF summing amplifier Inverting input pin of RF summing amplifier Output pin of (AVCC + AVEEI/2 Voltage Bias input pin of Center Voltage buffer Output pin of APC amplifier
66 57 E8 59 60 61 7 64 65 66 68 69 70 71 66 66 67 71 66 66 67 71 67 68 68 68 69 70 71 68 68 69 70 71 68 68 68 69 70 71 68 68 68 69 70 71 68 68 68 69 70 71 68 68 69 70 71 68 68 69 70 71 68 69 70 71 68 68 69 70 71 68 68 69 70 71 68 68 68 68 68 68 68 6	FE2 FE1 FDFCT FOK LDON EI EO FBIAS DVEE (S) AFI RFO AF CV LD PD	Digital positive power supply input pin for servo part Focus error servo input pin Output pin of focus error Amplifier Capacitor connection pin for defect compensation of focus servo Output pin of Focus ok comparator Leser diode ON/OFF control pin Faedback input pin of E I-V amplifier Output pin of E I-V Amplifier Bias pin of non-inverting Input of focus error amplifier Digital negative power supply input for servo part Output Signal of RF summing amplifier is Inputed through capacitor Output pin of RF erroring amplifier Inverting input pin of RF emming amplifier Output pin of (AVCC + AVEEI/2 Voltage Bias input pin of Center Voltage buffer Output pin of APC amplifier
56 57 58 59 50 50 50 50 50 50 50 50 50 50 50 50 50	FE2 FE1 FDFCT FOK LDON EI EO FBIAS DVEE (S) RF1 RFO RF- RV CV LO	Digital positive power supply input pin for servo part Focus error servo input pin Output pin of focus error Amplifier Capacitor connection pin for defect compensation of focus servo Output pin of Focus ox comparator Laser diode ON/OFF control pin Feedback input pin of E I-V amplifier Output pin of E I-V Amplifier Bias pin of non-inverting Input of focus error amplifier Digital negative power supply input for servo part Output Signal of RF summing amplifier is Inputed through capacitor Output pin of RF summing amplifier Inverting input pin of RF summing amplifier Output pin of (AVCC + AVEEI/2 Voltage Bias Input pin of Center Voltage buffer Output pin of APC amplifier
66 57 E8 59 60 61 7 64 65 66 68 69 70 71 66 66 67 71 66 66 67 71 67 68 68 68 69 70 71 68 68 69 70 71 68 68 68 69 70 71 68 68 68 69 70 71 68 68 68 69 70 71 68 68 69 70 71 68 68 69 70 71 68 69 70 71 68 68 69 70 71 68 68 69 70 71 68 68 68 68 68 68 68 6	FE2 FE1 FDFCT FOK LDON EI EO FBIAS DVEE (S) AFI RFO AF CV LD PD	Digital positive power supply input pin for servo part Focus error servo input pin Output pin of focus error Amplifier Capacitor connection pin for defect compensation of focus servo Output pin of Focus ox comparator Laser diode ON/OFF control pin Faedback input pin of E I-V amplifier Output pin of E I-V Amplifier Bias pin of non-inverting Input of focus error amplifier Digital negative power supply input for servo part Output Signal of RF summing amplifier is Inputed through capacitor Output pin of RF erroring amplifier Inverting input pin of RF emming amplifier Output pin of (AVCC + AVEEI/2 Voltage Bias input pin of Center Voltage buffer Output pin of APC amplifier
66 57 58 59 59 60 61 70 71 72	FE2 FE1 FDFCT FOK LDON EI EO FBIAS DVEE (S) RFI RFO RF- RV CV LD PD AVCC (R)	Digital positive power supply input pin for servo part Focus error servo input pin Output pin of focus error Amplifier Capacitor connection pin for defect compensation of focus servo Output pin of Focus ox comparator Laser diode ON/OFF control pin Feedback input pin of E I-V amplifier Output pin of E I-V Amplifier Rias pin of non-inverting Input of focus error amplifier Digital negative power supply input for servo part Output Signal of RF summing amplifier is Inputed through capacitor Output pin of RF erroring amplifier Inverting input pin of RF earming amplifier Output pin of (AVCC + AVEEI/2 Voltage Bias input pin of Center Voltage buffer Output pin of APC amplifier Input pin of APC amplifier Input pin of APC amplifier
66 57 58 59 50 50 50 50 50 50 50 50 50 50 50 50 50	FE2 FE1 FDFCT FOK LDON EI EO FBIAS DVEE (S) AFI RFO RF RV CV LD PD AVCC (R) N/C PD2	Digital positive power supply input pin for servo part Focus error servo input pin Output pin of focus error Amplifier Capacitor connection pin for defect compensation of focus servo Output pin of Focus ox comparator Laser diode ON/OFF control pin Faedback input pin of E I-V amplifier Output pin of E I-V Amplifier Rias pin of non-inverting Input of focus error amplifier Digital negative power supply input for servo part Output Signal of RF summing amplifier is Inputed through capacitor Output pin of RF erroring amplifier Inverting input pin of RF euming amplifier Output pin of (AVCC + AVEEI/2 Voltage Bias input pin of Center Voltage buffer Output pin of APC amplifier Input pin of APC amplifier Analog positive power supply input pin for RF part No connection
66 57 58 59 50 50 50 50 50 50 50 50 50 50 50 50 50	FE2 FE1 FDFCT FOK LDON EI EO FBIAS DVEE (S) AFI RFO RF RV CV LD PD AVCC (R) N/C PD2 PD1	Digital positive power supply input pin for servo part Focus error servo input pin Output pin of focus error Amplifier Capacitor connection pin for defect compensation of focus servo Output pin of Focus ox comparator Laser diode ON/OFF control pin Faedback input pin of E I-V amplifier Output pin of E I-V Amplifier Rias pin of non-inverting Input of focus error amplifier Digital negative power supply input for servo part Output Signal of RF summing amplifier is Inputed through capacitor Output pin of RF erroring amplifier Inverting input pin of RF emming amplifier Output pin of (AVCC + AVEE//2 Voltage Bias input pin of Center Voltage buffer Output pin of APC amplifier Input pin of APC amplifier Inverting Input pin of RF I-V AMP2 Inverting Input pin of RF I-V AMP2 Inverting Input pin of RF I-V AMP2
66 57 58 59 59 59 59 50 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 68 66 66 67 68 68 69 69 69 69 69 69	FE2 FE1 FDFCT FOK LDON EI EO FBIAS DVEE (S) RFI RFO RF RV CV LD PD AVCC (R) N/C PD2 PD1 F	Digital positive power supply input pin for servo part Focus error servo input pin Output pin of focus error Amplifier Capacitor connection pin for defect compensation of focus servo Output pin of Focus ok comparator Laser diode ON/OFF control pin Faedback input pin of E I-V amplifier Output pin of E I-V Amplifier Bias pin of non-inverting Input of focus error amplifier Digital negative power supply input for servo part Output Signal of RF summing amplifier is Inputed through capacitor Output pin of RF erroring amplifier Inverting input pin of RF amming amplifier Output pin of (AVCC + AVEEI/2 Voltage Bias input pin of Center Voltage buffer Output pin of APC amplifier Input pin of APC amplifier Input pin of APC amplifier Input pin of APC amplifier Analog positive power supply input pin for RF part No connection
66 57 58 59 50 50 50 50 50 50 50 50 50 50 50 50 50	FE2 FE1 FDFCT FOK LDON EI EO FBIAS DVEE (S) AFI RFO RF RV CV LD PD AVCC (R) N/C PD2 PD1	Digital positive power supply input pin for servo part Focus error servo input pin Output pin of focus error Amplifier Capacitor connection pin for defect compensation of focus servo Output pin of Focus ox comparator Laser diode ON/OFF control pin Faedback input pin of E I-V amplifier Output pin of E I-V Amplifier Rias pin of non-inverting Input of focus error amplifier Digital negative power supply input for servo part Output Signal of RF summing amplifier is Inputed through capacitor Output pin of RF erroring amplifier Inverting input pin of RF euming amplifier Output pin of (AVCC + AVEE/2 Voltage Bias input pin of Center Voltage buffer Output pin of APC amplifier Input pin of APC amplifier Inverting Input pin of RF I-V AMP2 Inverting Input pin of RF I-V AMP2 Inverting Input pin of RF I-V AMP2
66 57 58 59 59 59 59 50 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 68 66 66 67 68 68 69 69 69 69 69 69	FE2 FE1 FDFCT FOK LDON EI EO FBIAS DVEE (S) RFI RFO RF RV CV LD PD AVCC (R) N/C PD2 PD1 F	Digital positive power supply input pin for servo part Focus error servo input pin Output pin of focus error Amplifier Capacitor connection pin for defect compensation of focus servo Output pin of Focus ox comparator Laser diode ON/OFF control pin Faedback input pin of E I-V amplifier Output pin of E I-V Amplifier Rias pin of non-inverting Input of focus error amplifier Digital negative power supply input for servo part Output Signal of RF summing amplifier is Inputed through capacitor Output pin of RF euroming amplifier Inverting input pin of RF euming amplifier Output pin of (AVCC + AVEEI/2 Voltage Bias input pin of Center Voltage buffer Output pin of APC amplifier Input pin of APC amplifier Input pin of APC amplifier Input pin of APC amplifier Inverting Input pin of RF I-V AMP2 Inverting Input pin of RF I-V AMP2 Inverting Input pin of FI-V AMP1
66 57 58 59 59 59 59 50 60 61 62 63 64 65 66 69 70 71 72 73 74 75 76 77 50 7	FE2 FE1 FDFCT FOK LDON EI EO FBIAS DVEE (S) RFI RFO RF RV CV LD PD AVCC (R) N/C PD2 PD1 F E	Digital positive power supply input pin for servo part Focus error servo input pin Output pin of focus error Amplifier Capacitor connection pin for defect compensation of focus servo Output pin of Focus ok comparator Laser diode ON/OFF control pin Faedback input pin of E-I-V amplifier Output pin of E-I-V Amplifier Bias pin of non-inverting input of focus error amplifier Digital negative power supply input for servo part Output pin of RF summing amplifier is inputed through capacitor Output pin of RF summing amplifier Inverting input pin of RF summing amplifier Output pin of (AVCC + AVEEL/2 Voltage Bias input pin of Center Voltage buffer Output pin of APC amplifier Input pin of APC amplifier Input pin of APC amplifier Input pin of APC amplifier Inverting input pin of RF I-V AMP2 Inverting input pin of RF I-V AMP1 Inverting input pin of FI-V AMP1 Inverting input pin of E-I-V AMP

PIN No.	SYMBOL	1/0	DESCRIPTION
1. 25	Vop	1	Vop. 5V±10%
2-5	KLY0-KEY3	1	KEY METRIX INPUT
98-100	KEY4-KEY9	ō	KEY METRIX OUTPUT
10, 13	SCK1, SI1, INT3	1	FQ DISPLAY DATA, CLOCK, STROBE
14-17	AINO-AIN3		AREA OPTION
21	AIN7		STEREO INDICATOR INPUT
20	AIN6		SIGNAL DETECTOR
18	AIN4		KOREA MODE ZIG PORT
22, 30	Vss		DEVICE PORT
23	VASS		ANALOG DEVICE PORT
24	VAHEF	1	REFERENCE VOLT INPUT
26	STOP MODE	1	MEMORY H/L
27	TEST		N.C (GND)
28	XTIN	·i	
29	хтоит	ō	32.768KHz CRYSTAL TIME OPERATOR
31	XIN	. 1	
32	x our	0	8.0MH₂ CRYSTAL μ-COM OPERATOR
33	RESET		RESET SIGNAL INPUT
34	PIO (INTO) REMOTE IN	1	REMOTE CONTROL SIGNAL INPUT
35	INT 1 REMOTE OUT	0	REMOTE CONTROL SIGNAL OUTPUT
36	INT2	1	RDS START INPUT
7	SCKZ	1	RDS CLOCK INPUT
8	SI2	1	RDS DATA INPUT
48	P06	ō	MUTE OUTPUT
42	P00-P03	1	DATA IN PLL IC CONTROL
43	P00-P03	1	CE PLL IC CONTROL
44	PCO-PO3	0	CLOCK PLL IC CONTROL
45	PC0-P03	0	DATA OUT PLL IC CONTROL
50	Vvx	-	-30V
51-66	G16-G0	ō	FIP GRID DRIVE OUTPUT
67-89	S6-S26	ō	FIP SEGMENT DRIVE OUTPUT

45	PC0-P03	0	DATA OUT PLL IC CONTROL
50	Vsk	-	-30V
51-66	G16-G0	ō	FIP GRID DRIVE OUTPUT
57 - 89	S6-S26	7	FIP SEGMENT DRIVE OUTPUT
		7. 7. 7.	
IC71 (μ-COM)	AM	M 1247C
IN No.	SYMBOL	1/0	DESCRIPTION
1	RCIN	1	REMOCON data input
2	MUTE	0	MUTE signal output
3	SUBO LATCH	1	Sub code sync signai (S0+S1)
4 .	MLT	0	Latch signal output
5	MCK	0	Serial Clock output
6	MDATA	0	Serial data output
7	SUBQ DATA	1	Serial input of Subcode Q data
8	SUBQ CLK	1/0	Clock for output subcode Q data
9	GND		The state of the s
10			Non connection
11			Non connection
12	RESET		Reset port
13	XIN i	1 :	Ceramic oscillator input. 8MHz
14	XOUT	0	Ceramic oscillator output
15	GND		CELEBRITIC OSCITION OF CONTROL OF
16			Non connection
17	STB		Strobe input from DECK
18	318		Non connection
19	CLOCK		Clock input from DECK
	DATA	;	Data input from DECK
20 :			
	GFS DEMPH	0	The Lock Status input of fram sync
22	OPEN	0	Emphasis/Non Emphasis output ("H": Emphasis)
			Loading Motor open output
24	CLOSE		Loading Motor close output
25	OPSW	1	Close limit switch
26 27-32	OF3VV		Open limit switch Non connection
			Non connection
34-37	C1 C12		Grid output data
50~58	G1-G12 S9-S1	0	Segment output data
	33-31		Non connection
59~65 66	Vp		FLT power port (-32V)
67~73	KEYO-KEY7	-	Key read input port
76	SENS		The internal status input from DSP
			The state of the s
77	I.DON	0	Laser diade ON/OFF control port
78	FOK		Focus ok comparator pin
79	CD POWER	0_	Pawer ON/OFF switch control port
80	RCOUT	0	Remocon data output

PIN No.	SYMBOL	10	DESCRIPTION
40-43	P20-P23	1	KEY SCAN INPUT
44, 1. 2	P71-P73	0	KEY SCAN OUT
3	DATA	O	SERIAL DATA OUTPUT
4	CLK	0	SERIAL CLK OUTPUT
5	STB	0	SERIAL STROBE OUTPUT
6	REMO-O	O	REMOTE OUTPUT
7	MUTE	0	LINE MUTE
9 !	REPEAT	0	REPEAT LED DISPLAY
10	DOL-B	0	DOLBY-B OUTPUT
11	DOL-C	0	DOLBY-C OUTPUT
13	PAUSE	0	PAUSE LED DISPLAY
14	F-PLAY	0	FOR-PLAY LED DISPLAY
15	R-PLAY	. 0	REV-PLAY LED DISPLAY
16	REC	0	REC ON/OFF OUTPUT
17, 18	VSS	-	GND
20	RESET	1	RESET CONTROL PORT
21, 22	X1, 2	-	CRYSTAL IN/OUT PORT
23	MODE	0	REV-MODE LED DISPLAY
24	SOL	1	DECK SOLENOID CONTROL
25	MOTOR	1 1	DECK MOTOR CONTROL
26	REC-F	1	DECK FOR-REC SW DETECTOR
27	CL-MOT	0	LOADING CLOSE MOTOR CONTROL
28	OP-MOT	0	LOADING OPEN MOTOR CONTROL
29	PACK	1	DECK PACK SW DETECTOR
30	PLAY	1	DECK PLAY SW DETECTOR
31	REC-R	1	DECK REV-REC SW DETECTOR
32	HALL	1	DECK HALL IC DATA INPUT
33	OP-SW	1	LOADING OPEN SW DETECTOR
35	CL-SW	1	LOADING CLOSE SW DETECTOR
36	TPS	1	TPS DETECT PORT
37 ;	REMO-IN		REMOTE INPUT PORT
39	Vcp	-	Voc +5V

No.	SYMBOL	1/0	DESCRIPTION
1	DOLI	0	DRIVE OUTPUT
2	DOL2		DRIVE OUTPUT
3	DIL1		DRIVE INPUT
4	DIL2		DRIVE INPUT
5	REG		REGULATOR
6	VREG	0	VOLTAGE REGULATOR
7	MUTE	+	MUTE
8	GND1		GND
9	DI2.1	1 1	DRIVE INPUT
10	DI2.2		DRIVE INPUT
11	DO2.1	0	DRIVE OUTPUT
12	DO2.2	! 0	DRIVE OUTPUT
13	GND2		GND
14	OPOUT		OP AMP OUTPUT
15	OPIN (-)		OP AMP INPUT (-)
18	OPIN (+)		OP AMP INPUT (+)
17	DO3.1	0	DRIVE OUTPUT
18	DO3.2	0	DRIVE OUTPUT
19	DI3.1	1 1	DRIVE INPUT
20	DI3.2	1	DRIVE INPUT
21	Vcc1		Voltage Regulator (+8V)
22	Vcc2	1	Voltage Regulator (+8V)
23	VREF		2.5V BIAS REQULATOR
24	DI1.1	, 1 :	DRIVE INPUT
25	DI1.2	1 1	DRIVE INPUT
26	DO1.1	0	DRIVE OUTPUT
27 .	DO1.2	0	DRIVE OUTPUT
28	GND3	1.	GND

